Final Evaluation Report

Dates covered by report:
January 1, 2010 through June 30, 2013

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Final Evaluation Report[1]

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Dates covered by report: January 1, 2010 through June 30, 2013

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[2] The findings and conclusions presented in this report are those of the project evaluation team and do not necessarily reflect the views, opinions, or policies of the leadership and Board of Trustees of The University of Tulsa.

I. INTRODUCTION

This report presents findings from the evaluation of Project Endeavor, a grant awarded to Communication Service for the Deaf, Inc. (CSD), Sioux Falls, South Dakota. CSD, a private 501(C)(3) non-profit organization, was founded in 1975 to reduce communication barriers experienced by persons who are deaf or hard of hearing and to provide services to the deaf community focusing on quality of life improvements. Today CSD is an international leader in telecommunication services and employs individuals across the nation, focusing on telecommunication access and a broad continuum of social and human services programs.

Project Endeavor was funded by the National Telecommunications and Information Administration through the Broadband Technologies Opportunity Program[3] (BTOP) at the U.S. Department of Commerce as a Sustainable Broadband Adoption (SBA) project.[4] SBA projects promote increasing broadband usage and adoption among populations where broadband technology traditionally has been underutilized. Many projects include digital literacy training and outreach campaigns to increase the relevance of broadband in people's everyday lives.

DESCRIPTION OF PROJECT ENDEAVOR

In the fall of 2010, CSD launched Project Endeavor and began creating new jobs: network engineers, product designers, human service specialists, outreach and media specialists, web designers and digital media artists, project managers, interpreters, and customer service agents were hired. Specialized, cross-disciplinary teams were charged with determining products and services to be offered through Project Endeavor and to keep abreast of new technological innovations that had the potential to improve access to communication and improve the quality of life for deaf or hard of hearing persons. The majority of the individuals hired to work on Project Endeavor were deaf and hard of hearing, used American Sign Language (ASL) as their primary language or in the case of hearing staff, were fluent in ASL. Moreover, all staff had cultural competence in working with the diverse population of persons who are deaf or hard of hearing.

The main goal of Project Endeavor was to expand broadband adoption and usage among the nations deaf and hard of hearing population who rely on visual communication: persons who are bilingual, communicate primarily through ASL, learned English as a second language, and rely on text-based, written communication because their degree of hearing loss prevents them from using a telephone. The project provided subsidized broadband services and a wide array of wireless, mobile devices to participants who resided in all 50 states, Guam, Puerto Rico, and the U.S. Virgin Islands. In addition to broadband services and mobile, wireless devices the project provided educational opportunities that focused on increasing the digital literacy of participants through offering workshops, one-on-one training and technical support through the Contact Center, a video-based call center located in Sioux Falls, SD, and educational videos in ASL on the Project Endeavor website.

Another important component of Project Endeavor was the establishment of partnerships with Community Anchor Institutions (CAIs): schools, libraries, medical and health care providers, institutions of higher education, and community support organizations. CAIs were assisted in using their broadband connections to offer Video Remote Interpreting (VRI) and/or to install Public Access Videophone (PAVs) in their facilities so that deaf or hard of hearing persons could access broadband and the Internet without paying monthly service fees.

PROJECT ENDEAVOR KEY OUTCOMES

1.	Subsidized devices and broadband subscriptions provided	14,195
2.	Outreach and media impressions (website unique views, YouTube videos, flyers)	3,938,090
3.	Partnerships with Community Anchor Institutions	181
4.	Learners (viewed website educational videos, attended workshops, received technical support through the Contact Center)	250,386
5.	Enrollment in online employment curriculum	550
6.	Captioned phones disseminated to hard of hearing seniors	1,310

[3] Read more about the BTOP program at http://www2.ntia.doc.gov/about
[4] See http://www2.ntia.doc.gov/sustainableadoption for a list of SBA projects

Key Outcomes continued

7. Services were provided to deaf and hard of hearing persons in all 50 states, the District of Columbia, Guam, Puerto Rico, and the U.S. Virgin Islands.
8. Higher rates of existing broadband adoption were identified among participants compared to initial available research data. However, some participants underutilized their broadband connections.
9. Participants indicated a strong desire to acquire mobile, wireless devices with video capability, i.e., tablets or other hand-held devices.
10. Affordability was identified as a barrier to participation throughout the project as many households were impacted negatively by the overall economy. Payment plans alleviated some of the affordability barrier.

DIGITAL LITERACY FINDINGS

11. The need for more accessible training was reported by 66% of the participants. The need for further training was also confirmed by Focus Group participants.
12. Digital literacy pre-post comparisons revealed increases in Computer and Internet Use. The greatest gains were made in the *Moderately skilled, independent in basic use* area.
13. Participants responded most frequently that they wanted to learn how to create a website, film and edit movies, create a VLOG, create PowerPoint presentations, create Excel spreadsheets, use a wireless printer, and set up a wireless router.

FOCUS GROUP FINDINGS

14. Broadband has increased access to information and improved the quality of life for deaf and hard of hearing persons in many areas (finance, education).
15. Wireless broadband access and tablet devices (iPads) have decreased the isolation of elderly deaf and hard of hearing persons. However, those that live in rural areas with limited access to broadband remain isolated.
16. Ongoing training is needed to alleviate the gap in digital literacy skills that has occurred due to access barriers. Training should be one-on-one or in small groups by trainers who are fluent in ASL and utilize pedagogies that incorporate visual learning techniques.
17. Affordability remains a barrier to accessing broadband services in both urban and rural areas. However, deaf and hard of hearing persons residing in urban areas have more options to access broadband in public use areas than those persons living in rural areas.
18. Deaf and hard of hearing persons, like many Americans, feel that they must control the usage of technology instead of technology controlling them. Furthermore, they were concerned about the amount of technology used by their children and felt it may compromise their social skills.

CUSTOMER SATISFACTION SURVEY FINDINGS

19. Seniors with hearing loss who received the captioned phone reported high rates of satisfaction with the product. Narrative comments were overwhelmingly positive about how the new technology and captioning service increases communication access.
20. Customer Satisfaction Surveys revealed that 83% of participants rated Project Endeavor services as Excellent.
21. Customer Satisfaction Surveys also revealed that 93% of participants reported direct communication access through ASL was *Very* or *Somewhat Important*.
22. Participants ranked communication preferences in the following order: 1) direct communication through ASL, 2) email, 3) VRS interpreter, 4) text messages, and 5) interpreting. Most participants preferred not to use lipreading or writing back and forth.

II. EVALUATION DESIGN

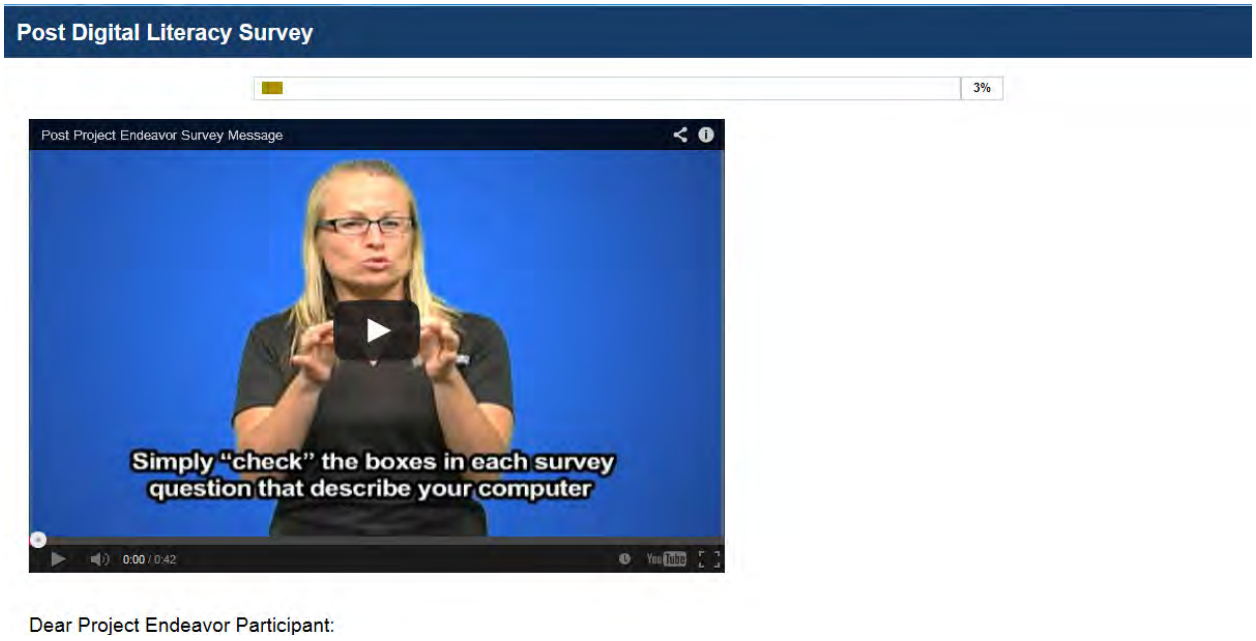
The effectiveness of the project in attaining its goals was evaluated by Sharon Baker, EdD, The University of Tulsa.[5] Evaluation began in the first quarter of 2011 and continued until June 30, 2013. The evaluation involved a mixed methods design involving formative evaluation activities related to program implementation and summative evaluation to evaluate project outcomes.

DATA COLLECTION METHODS

1. Project Endeavor created a management system for collecting key operating indicators and statistics for major project activities and outputs. Reports were generated on a monthly basis for the purpose of evaluation and quarterly reports were prepared by the Project Endeavor evaluator.

2. Baseline data were collected from deaf and hard of hearing persons applying for Project Endeavor services. Specific questions gathered information that served as the pre-data measure of Computer Use and Internet Use. It is important to note that participation rates were lower in pre-data collection (38%) compared post-data collection (46%), which can affect the generalizability of the evaluation results.

3. Survey instruments were developed to collect responses from program participants. All online surveys were prepared to be accessible for deaf and hard of hearing participants through integrating videos with translation in ASL, captioning, and voice translation.



- Customer Satisfaction Survey

An online survey was created to gather data regarding participants' responses related to how satisfied they were with Project Endeavor product offerings and services. In addition, questions were asked to gather information about the importance of communication access and communication preferences (see Appendix B).

- Captioned Phones for Seniors Customer Satisfaction Survey

This survey was administered to seniors with hearing loss who received CapTel captioned telephones through Project Endeavor. Instead of administering it over the Internet, staff conducted a phone interview and then filled in the online survey (see Appendix C).

[5] Dr. Sharon Baker. EdD, Department of Communication Disorders, University of Tulsa, 800 S. Tucker Drive, Tulsa, OK 74104. Email: bakers@utulsa.edu, Phone: 918-631-2910

- Digital Literacy Survey

The post digital literacy online survey was based on BTOP grantee, *Connect Your Community's,* pre-post assessment instrument. Modification included adjusting language and readability levels to be more appropriate for deaf and hard of hearing readers. All questions were presented in ASL and captioned. In the event that respondents had difficulty viewing the videos on their home computers, they had the option of calling the Contact Center to have the survey administered live by Contact Center representatives (see Appendix D).

4. Indepth Interviews

In the second quarter of 2011, the evaluator conducted indepth interviews, which served as a preliminary needs assessment. Face-to-face interviews were conducted to gather data regarding barriers to participating in Project Endeavor, barriers to broadband adoption, access to the Internet, wireless accessibility, price-point preferences, etc. (see Appendix E).

5. Review of the Project Endeavor Website

Deaf and hard of hearing professionals living in different geographical regions were invited to conduct an external review of the newly redesigned Project Endeavor website and provide feedback regarding visual appeal and functionality in the third quarter of 2011. An online survey collected reviewers' responses. Reviewers also rated a randomly-selected number of educational videos in ASL and completed a rating form that provided both quantitative and qualitative data (see Appendix F).

6. Focus Groups

Focus groups were conducted in the metropolitan areas of Boston, Minneapolis, Austin, and Los Angeles. The purpose of the focus groups was to gather rich narrative data regarding computer use, Internet access, barriers to broadband adoption, changes in quality of life as result of broadband, etc. (see Appendix G).

DATA ANALYSIS

Online survey results were analyzed using SPSS statistical software. The following analyses were conducted: 1) measures of central tendency, 2) one-way between groups analysis of variance (ANOVA), and 3) eta-squared effect size (measure of the strength of the relationship). Effect size classifications were used according to the following: .01 - a small effect, .06 - a medium effect, and .14 - a large effect.[6]

Content Analysis was conducted of narratives generated from the focus group report, the website external review, and open-ended questions on survey instruments. A coding system rank ordered the findings.

It is important to note that Program Evaluation focuses on monitoring the degree to which the project achieved its stated goals and objectives, the effectiveness of the project, and the potential impact of the project's outcomes. There are several limitations to Program Evaluation one of which is that cause and effect relationships between the project and its outcomes are difficult to determine. Another limitation to consider is the small number in subgroup analyses, making it difficult to generalize findings; they may be statistically significant but not necessarily meaningful. High numbers of nonresponse in the pre-data collection to certain survey items also provides further limitations of the findings.

The analyses presented in this report were prepared according to prevailing standards in the field of program evaluation and conforms to U. S. Department of Health and Human Services Regulations for the Protection of Human Subjects. The evaluator obtained the required human subjects approval for exempt status from The University of Tulsa's Institutional Review Board.

[6] See Cohen, J., 1988. Statistical power analysis for the behavioral sciences. Hillsdale, N.J.: L. Erlbaum

III. QUANTITATIVE AND QUALITATIVE OUTCOMES

This section provides a narrative of Project Endeavor's outcomes, both quantitative and qualitative, regarding the impact of the project on deaf and hard of hearing persons' access to communication through broadband technologies, digital literacy, and quality of life improvements achieved through greater access to broadband technologies.

BACKGROUND

In March, 2010, a study by the Federal Communications Corporation found that 65% of American adults have broadband at home compared to 42% of Americans with disabilities.[7] The study did not disaggregate the data by disability; therefore, the percentage of deaf and hard of hearing persons without access to broadband was unknown at the beginning of Project Endeavor. As a result, throughout Project Endeavor, efforts were made to quantify and describe the state of broadband adoption among American adults who are deaf or hard of hearing to better understand the penetration of broadband adoption among this population.

INCREASING ACCESS TO BROADBAND

GOAL ONE
Expand the number of deaf and hard of hearing individuals using broadband by reducing barriers to broadband adoption and utilization.

LOGIC MODEL

SHORT-TERM IMPACT	MID-TERM IMPACT	LONG-TERM IMPACT
Increased awareness of the benefits of broadband Increased awareness of options for connecting to the Internet through different broadband configurations and service providers Increased awareness of how to access broadband in public places Greater awareness of services provided by Project Endeavor	Reduction in barriers related to affordability Increased number of unserved or underserved deaf and hard of hearing individuals utilizing broadband Greater utilization of wired and wireless equipment to access broadband	Barriers to broadband adoption are reduced Greater numbers of deaf and hard of hearing individuals utilizing broadband for communication, to access to digital content on the Internet, and to use advanced applications

DATA COLLECTION METHODS
Tracking applications and pre-data in CRM database
Monthly sales reports
Logs of VRI services and PAV installations at CAIs

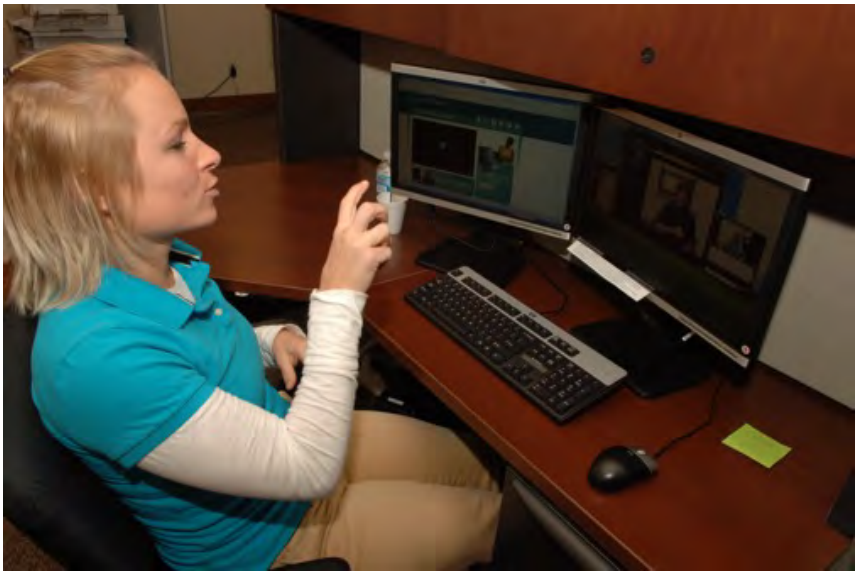
ACCESS TO BROADBAND OUTCOMES

- 60% broadband adoption rate (estimated)
- 14,195 subsidized devices and broadband subscriptions
- 181 partnerships with Community Anchor Institutions
- 1,310 captioned phones distributed to hard of hearing seniors
- 3,938,090 media impressions

[7] See John B. Horrigan, March, 2010. Broadband Adoption and Use in America: Results from an FCC Survey

1. THE CONTACT CENTER – AN EMERGING CONCEPT IN PROVIDING TECHNICAL SUPPORT IN ASL

At the beginning of the project, a Contact Center was established to serve as a point of contact for Project Endeavor participants and to provide customer service. The Contact Center functioned similarly to a call center that uses telephones to make voice calls; however, the Project Endeavor Contact Center accepted incoming and outgoing video calls and provided a high level of service for deaf and hard of hearing persons using direct communication in ASL. Contact Center representatives were hired to assist participants in completing the application process and to provide one-on-one training and technical support.



Like other culturally and linguistically diverse groups, language access and culturally-appropriate services were necessary to recruit participants. Project Endeavor offered *Deaf-to-Deaf* (D2D) support, a critical component of the customer experience. D2D equalizes communication access by removing the interpreter from the communication process and by providing direct communication between the Contact Center representative and the applicant.

Contact Center representatives were deaf or hard of hearing, skilled in communicating in ASL, and exhibited cultural competencies. The representatives were adept at using a wide range of regional signed dialects and registers (low to high) that are used by deaf and hard of hearing persons thus reducing barriers to communication access. D2D support provides not only communication access but also adjusts communication and terminology based on the level of digital knowledge of the individual and uses culturally appropriate communication strategies (non-manual signals) when communicating, making deaf and hard of hearing participants feel more at ease throughout the process. Because the Contact Center representatives were collecting highly confidential information (income verification that confirmed poverty level, hearing loss levels, etc.) a high level of trust was necessary in order to serve participants.

Initially, the Contact Center managers thought it would be fairly simple to collect applications from Project Endeavor participants. It was discovered that the process required multiple contacts and follow-up video calls. Pending applications sometimes required a longer time period than originally estimated in order to process them. After applications were approved, Contact Center representatives provided one-on-one customized training regarding which broadband service would best fit the applicant's individual and financial needs. The same level of service was necessary when individuals began learning about device options. Most applicants were educated about mobile devices and were assisted in selecting the best one to fit their individual needs. This level of service provided is rarely offered to deaf and hard of hearing persons because it is labor intensive. Customer satisfaction results revealed high levels of satisfaction with the level of services.

2. OUTREACH AND MEDIA

Outreach and electronic media played critical roles in the marketing of Project Endeavor. Relying on the interconnected networks of deaf and hard of hearing people who get the majority of their information through electronic media, Project Endeavor Outreach staff began a campaign to get new subscribers using email blasts, community-oriented listservs, social networking, VLOGS posted on YouTube, etc. Non-electronic advertisements and printed materials were also disseminated at deaf events, conferences, and conventions.

Although the number of media impressions was high, the number of new broadband subscribers remained low during the first two quarters of the project. Outreach and Media was reorganized in Q2 of 2011, and a decision was made to move to less electronically-delivered recruitment activities. The reorganization resulted in the decentralization of Outreach and the assignment of Outreach staff to specific regions. Further, Outreach staff designed recruitment strategies that deployed human networks and grassroots campaigns to identify individuals without broadband who may benefit from Project Endeavor's services.

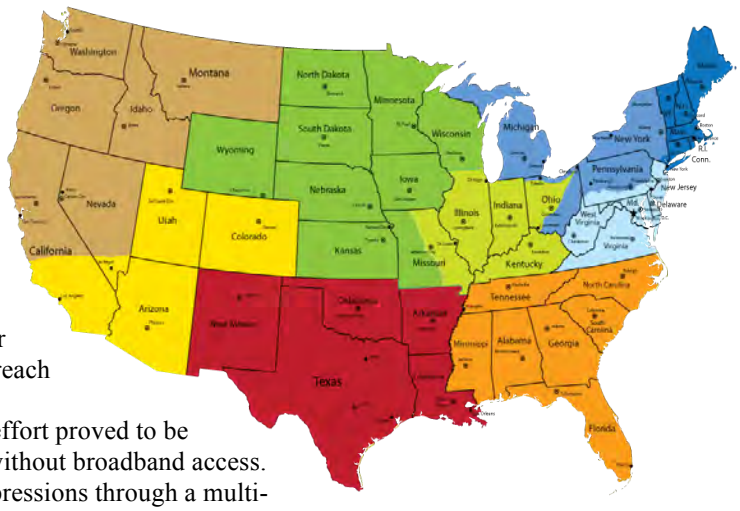


Figure 1. Reorganization of Outreach and Media into Regions

With each specialist's intimate knowledge of his/her home regions, Project Endeavor was better able to reach out to the local grassroots communities and enlist collaboration from local organizations. This effort proved to be more effective than initial attempts to reach those without broadband access. Outreach and Media achieved 3,938,090 media impressions through a multi-

pronged approach that included tracking views of the Project Endeavor website, documenting print media (brochures, flyers) distribution, tracking consumption of electronic and social media, maintaining logs to track participation rates when exhibiting at deaf-focused events, presenting at conferences, and conducting regional, grassroots campaigns.

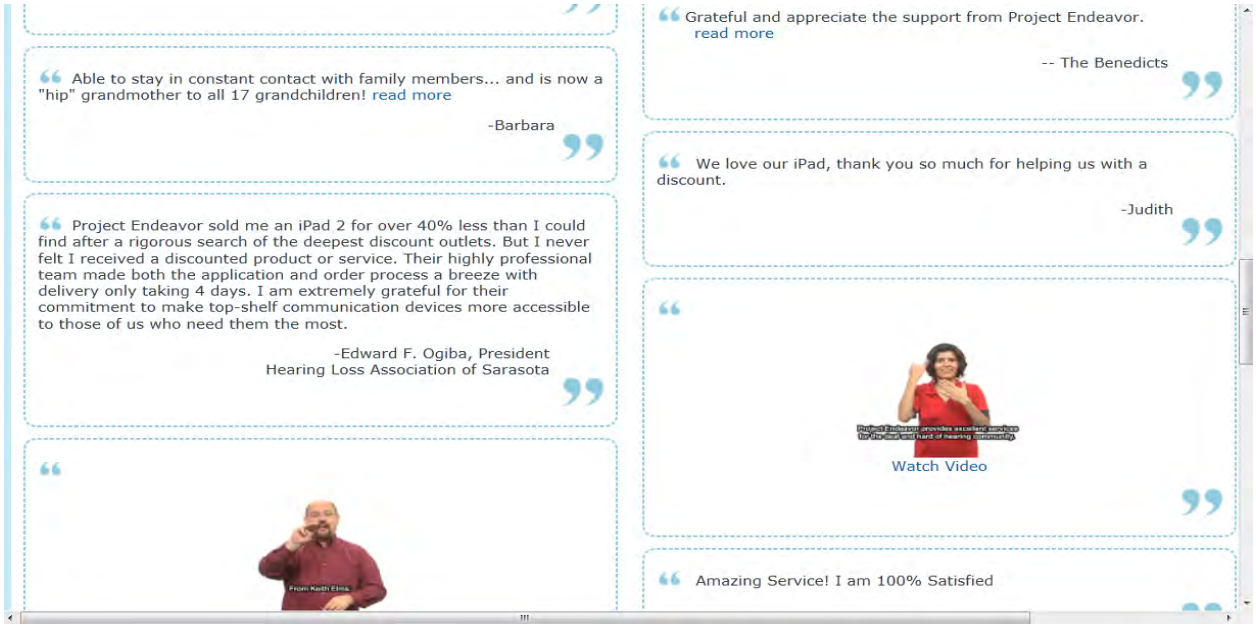
3. THE PROJECT ENDEAVOR WEBSITE: AN ASL RESOURCE FOR BTOP

The Project Endeavor website located at www.projectendeavor.com was a model of accessibility and an important tool for the recruitment of participants. Located at www.projectendeavor.com, the Project Endeavor website also served as the primary information center and provided information about applying for Project Endeavor services, qualification guidelines, and other information relevant to the application process. The website front page provided a graphic drawing of a community with interactive visual images that assisted applicants in learning about the benefits of participating in Project Endeavor. By scrolling over various images, popup text boxes provided information about various devices and how they could be used. The website also provided links to resources and a Video Library over 430 accessible educational videos in ASL with captions and voice translation to assist participants in building a digital literacy knowledge base.

The educational videos in ASL presented information on various topics to assist participants in developing their digital literacy skills from the basics of how to use a computer and the Internet to downloading an app on an iPad. As the device offerings expanded, educational videos in ASL were created to provide information about specific devices, service agreements, and other relevant topics of interest to participants (see Appendix G for a list of educational videos).

The website also posted PSAs in ASL in order to keep participants updated with Project Endeavor's latest news, provided a survey box for participants to share their experiences regarding Project Endeavor, and added a Testimonial Page with personal comments from Project Endeavor participants.

Sample testimonials from the Project Endeavor website:



4. CREATING SYNERGY

After a sluggish beginning, three initiatives were instituted simultaneously to stimulate participation in Project Endeavor:

- Outreach began an aggressive, grassroots campaign to recruit participants without broadband access.
- Options for broadband services were expanded to include a wide selection of wireless devices along with traditional broadband services.
- Income restrictions were expanded to include persons with slightly greater earning power.

These initiatives created synergy and a surge in applications by deaf and hard of hearing persons with limited or no broadband services and those who were migrating to wireless devices. A partnership with BestBuy, headquartered in

Minneapolis, was pivotal because the company provided efficient distribution and shipping of devices. In addition, Project Endeavor participants could conveniently go to their nearest BestBuy store for follow up services.

Even with these new measures in place, the Outreach staff identified affordability as a primary barrier to adoption. They also reported that many low-income, deaf or hard of hearing persons experienced language barriers. They were reticent to sign contracts with vendors because they did not understand the contractual language. Furthermore, many of them responded that while low-cost, broadband options were available, they feared that once the initial rate expired, maintaining the subscription would not be affordable.

5. PARTNERSHIPS WITH COMMUNITY ANCHOR INSTITUTIONS TO EXPAND COMMUNICATION ACCESS FOR DEAF AND HARD OF HEARING PERSONS

VIDEO REMOTE INTERPRETING

The delivery of interpreting services is changing as broadband capacity is enhanced and new technological innovations such as Video Remote Interpreting (VRI) come to the market place. VRI provides a sign language interpreter by using specialized technologies and high-speed broadband connections. The interpreter remains in a remote location and interpreting services are delivered through landlines and wireless broadband connections. VRI has the potential to alleviate the chronic shortage of interpreters in many areas throughout the country and to improve communication access for deaf and hard of hearing persons.

During the final phase of Project Endeavor, VRI product engineers tested new platforms and solicited CAIs to pilot the newly designed VRI product. CAIs, especially those in areas where there is a chronic shortage of interpreters, were involved in the pilot. After a successful pilot, Project Endeavor began offering introductory trials with other CAIs. Normally, VRI is a paid service like community interpreting. However, through Project Endeavor, VRI trials are being offered to qualified CAIs at no cost from April 1 to September 30, 2013.

PUBLIC ACCESS VIDEOPHONES (PAVS)

While the general public usually has access to telephones in public spaces, deaf and hard of hearing persons most often do not. Therefore, an individual without broadband service in his/her home or an individual without a functioning wireless-enabled mobile device may not have many options for accessing the Internet. The PAV units were designed specifically to enable deaf and hard of hearing persons to access the Internet from public use areas. Similar in appearance to a pay phone, the PAV unit connects directly with VRS providers and the Internet. PAV units increase access to broadband services and were installed in CAIs throughout the country.

6. PARTNERSHIPS WITH BUSINESSES TO PROMOTE BROADBAND ADOPTION FOR DEAF AND HARD OF HEARING LOW-INCOME SENIORS

Partnership with Sprint Wireless and Its Partners

Project Endeavor partnered with Sprint to offer CapTel 840i phones and captioned phone services. CapTel® is a technology offered by Ultratec, Inc., Madison, WI. This technology allows hard of hearing telephone users to read what is being said on a screen displayed on their phones. Qualifying seniors received the CapTel 840i telephone, and if desired, a package that also included a CradlePoint wireless Internet router provided by Feeney Wireless, Eugene, OR and two years of discounted Internet service.

When a hard of hearing user makes a telephone call, the phone connects to the Internet to access free captioning services. An operator at the captioning service uses voice recognition technology to generate captions of the conversation. The captions are displayed on a screen built into the telephone and are similar to viewing captions on a television.

Captioned phones are ideal for people with hearing loss who speak for themselves, but have difficulty hearing over the telephone, especially those who have lost their hearing later in life. This program targeted low-income, hard of hearing senior citizens who were unable to communicate via a telephone due to the severity of their hearing loss. Without the ability to communicate over the phone, seniors with hearing loss often become isolated and have increased health risks. Captioned phones have the potential to make tremendous differences in seniors' lives by reducing the ill-effects of isolation, which is often experienced by seniors with hearing loss.

7. UNEXPECTED FINDINGS

A. THE MAJORITY OF PROJECT ENDEAVOR PARTICIPANTS HAVE ACCESS TO BROADBAND FOR VIDEOPHONE COMMUNICATION

Despite a concerted effort by the Outreach team, identifying deaf and hard of hearing persons without broadband access was challenging, and numbers of new broadband adopters remained below initial estimates. The Outreach team continually assessed the situation and found it to be perplexing as the Outreach team was comprised of persons who were deaf or hard of hearing who had cross-cultural competencies and experience working with diverse populations. In addition, they were individuals who were members of the community and were well versed in how the community communicates with each other through complex social networks. The Outreach team deployed multiple avenues to reach deaf and hard of hearing persons without broadband access. They used tried and true methods of networking in the community to assist deaf and hard of hearing persons without broadband access. Even after deploying multiple avenues including grassroots campaigns, broadband subscriptions remained well below benchmarks. The Outreach staff could only surmise that broadband adoption rates were higher among deaf and hard of hearing persons than the population of American adults with disabilities, which was estimated to be 42% in 2010.[8]

B. PARTICIPANTS REPORTED UNDERUTILIZATION OF BROADBAND

Repeatedly, Project Endeavor participants reported that they were unaware that the cable connection used for a videophone could also be used for Internet access to check email, search the Internet, etc., revealing low levels of digital literacy among many participants.

C. STRONG DEMAND FOR MIGRATION TO WIRELESS BROADBAND

Technological innovations during Project Endeavor affected participants' selection of broadband options in the following ways:

- The rapid expansion and availability of wireless hotspots
- The availability of wireless devices with upgraded video functionality that could be deployed over wireless networks
- New applications such as FaceTime and Skype which allowed mobile to mobile video communication to occur over high speed, wireless broadband connections

These new innovations, which occurred over a very short timeframe, were catalysts for deaf and hard of hearing persons to migrate to wireless broadband and become more mobile. They were able to communicate visually without being bound to landlines and videophones for the first time ever. As a consequence of these innovations, participants in Project Endeavor most often requested mobile devices with wireless video capabilities rather than the installation of broadband landlines in their home residences. This was unexpected at the launch of Project Endeavor.

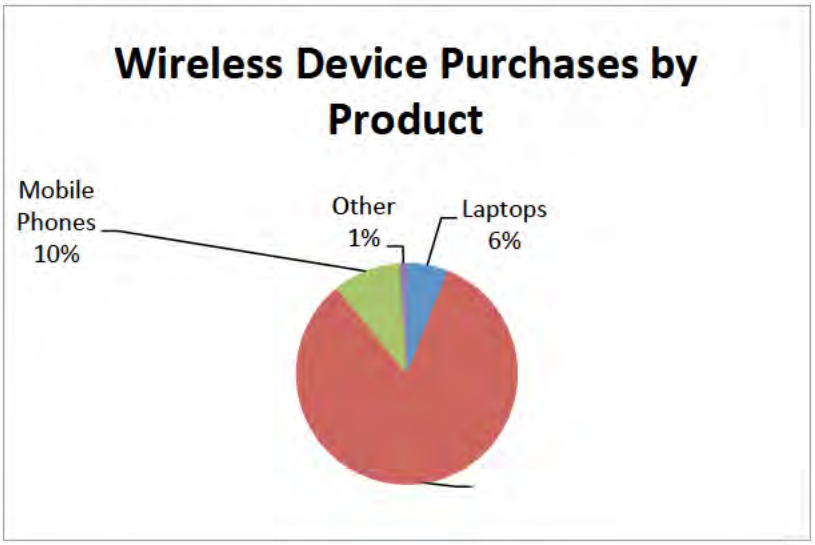
[8] See John B. Horrigan, March, 2010. Broadband Adoption and Use in America: Results from an FCC Survey

To respond to this migration to wireless devices, companies providing VRS services created mobile apps so that interpreting services could be accessed from mobile devices. These innovations spurred more innovations all leading to increased levels of communication access and parity for deaf and hard of hearing persons. The result was increased freedom and mobility to communicate with others.

D. STRONG DEMAND FOR WIRELESS DEVICES TO CONNECT TO THE INTERNET REMOTELY

Participants in Project Endeavor also wanted devices with the strongest capacity for video transmission. As a result, they most often selected tablets and handheld mobile devices.

Figure 2. Type of Wireless Device Purchases by Participants



IV. INCREASING DIGITAL LITERACY

GOAL TWO

Increase digital literacy of deaf and hard of hearing persons by providing greater access to information through media content in accessible formats (signed video and captioned text) and training opportunities that focus on improving knowledge and skills related to computer and broadband applications.

LOGIC MODEL

SHORT-TERM IMPACT	MID-TERM IMPACT	LONG-TERM IMPACT
Increased awareness of accessible content on the Internet (signed video /captioned text) Increased opportunities to learn about computer technologies, the Internet, and other broadband applications	Increased knowledge of broadband and how it supports communication and Internet access Increased knowledge of ways to utilize the Internet to gain information Broadened experience in using technological applications that utilize broadband	Higher levels of digital literacy by deaf and hard of hearing consumers Higher rates of broadband usage by deaf and hard of hearing consumers

DATA COLLECTION METHODS
Web-trend reports that track website activity (views, hits)
Electronic communication and social media consumption tracking
Logs maintained by Outreach staff (participation in workshops, conferences, and trainings)
Logs of Contact Center representatives (technical support and one-on-one training)

DIGITAL LITERACY OUTCOMES

- 403 outreach events
- 430 educational videos created in ASL
- 250,386 learners
- 2,385 one-on-one trainings
- 550 enrolled in online course

Educational opportunities in ASL were provided to deaf and hard of hearing persons through educational videos on the Project Endeavor website, one-on-one training by Contact Center representatives, and through trainings offered at events (conferences, workshops, and training sessions).

1. BUILDING AN EDUCATIONAL VIDEO LIBRARY IN ASL

More than 430 accessible educational videos were produced in ASL with captions and with voice translation over a wide range of topics including new products offered through Project Endeavor and apps to increase digital literacy (see Appendix G) for a list of educational videos in ASL). Also, videos were produced based on suggested topics identified by the Contact Center that emerged from the application process to help participants understand contract language, warranties, etc. (see Video Library on the Project Endeavor website).

2. LINKING TO OTHER RESOURCES ON THE PROJECT ENDEAVOR WEBSITE

The Project Endeavor website provides links to other BTOP projects and other helpful resources that provide further training opportunities (see Resources tab on the Project Endeavor website).

3. PROVIDING ONE-ON-ONE SUPPORT IN ASL BY THE CONTACT CENTER

Focus group participants emphasized the need for accessible training in ASL utilizing small group or one-on-one sessions in order to accommodate their visual learning needs. The Contact Center provided this important service to participants in Project Endeavor. Regardless of the level of broadband knowledge or digital literacy, Contact Center representatives assisted participants in increasing their understanding of broadband technologies and building a digital literacy knowledge base. Contact Center representatives were often needed to help participants understand terminology and to assist participants in concept building so that they maximize their consumption of broadband technologies and participate fully in today's digital society. They helped participants understand the broadband options in their communities and assisted them in selecting devices based on individual preferences and affordability. Support continued through broadband setup, device selection, and startup to ensure a successful broadband experience. Deaf and hard of hearing participants reported high levels of customer satisfaction with the support provide by the Contact Center and the provision of direct communication in ASL.

4. OFFERING WORKSHOPS AND OTHER TRAINING OPPORTUNITIES

The Outreach team utilized multiple strategies to inform deaf and hard of hearing persons about Project Endeavor and the vast learning opportunities that were available for them. Outreach representatives exhibited at national expo events with large numbers of attendees and presented workshops at conferences. Small group training sessions were also held in conjunction with local deaf community events.

5. MAXIMIZING BROADBAND BY TAKING ONLINE COURSE FOCUSING ON JOB SEARCH AND EMPLOYMENT SKILLS NEEDED IN THE WORK PLACE

Project Endeavor identified a need for training materials for an underserved population: non-college bound deaf and hard of hearing adults who were either looking for work or considering changing their current employment situation. *Your Road Trip-Destination Employment* is a self-paced, interactive, online course delivered in ASL. It fills an important gap in online, accessible materials that are specifically designed for this population and may serve as a model for course designers of how to make online learning accessible for deaf and hard of hearing persons. Since the launch of the online course in April, 2012, 550 students have enrolled.

Note: Nominated for an Award
Your Road Trip – Destination Employment curriculum was nominated for the FCC's Chairman's Awards for Advancement in Accessibility in the category of Consumer Empowerment Information.

V. IMPROVING QUALITY OF LIFE THROUGH MAXIMIZING BROADBAND ACCESS AND INCREASING DIGITAL LITERACY

GOAL THREE

Improve deaf and hard of hearing individuals' quality of life through maximized usage of broadband to communicate visually, access digital information, and learn new broadband applications.

SHORT-TERM IMPACT	MID-TERM IMPACT	LONG-TERM IMPACT
Increased awareness of ways that broadband can improve quality of life. Increased awareness of the benefit of Project Endeavor services	Increased knowledge of broadband, how it improves one's ability to communicate visually and provides a platform for accessible content. Increased knowledge of ways to obtain assistance when services are not available in one's own community. Increased ways to seek employment, to access health care, emergency services, etc. by using broadband.	Deaf and hard of hearing customers who maximize broadband applications to the fullest extent for communication and information access. Deaf and hard of hearing customers knowledgeable of options for receiving services and confident in using broadband to access services. Improved quality of life for deaf and hard of hearing consumers.

DATA COLLECTION METHODS
Quantitative: Digital Literacy Survey
Qualitative: Focus Groups

1. DIGITAL LITERACY SURVEY FINDINGS

Pre-data Collection
The digital literacy pre-data were collected when Project Endeavor participants made application for subsidized broadband services or mobile devices. This data, along with the required information for application including extensive documentation of income and disability qualifications, were collected by Contact Center representatives and entered into the CRM database.

Post-data Collection
The post-digital literacy online survey gathered comparative data that corresponded to pre-data collection in two areas: 1) Computer Use, and 2) Internet Use. In addition, participants' digital literacy skills were assessed at the end of the project.

The post digital literacy online survey was based on BTOP grantee *Connect Your Community's* pre-post assessment instrument. Modification included adjusting language and readability levels to be more appropriate for deaf and hard of hearing readers. All questions were in ASL and captioned. In the event that respondents had difficulty viewing the videos on their home computers, they had the option of calling the Contact Center to have the survey questions administered live by Contact Center representatives (see survey in Appendix C).

In the pre-data collection, 2,930 participants (response rate of 38.3%) provided information about themselves during the application process. A total of 3,793 participants (response rate of 45.6%) completed the post digital literacy survey.

<u>Computer Use and Internet Use Pre-Post Findings</u>

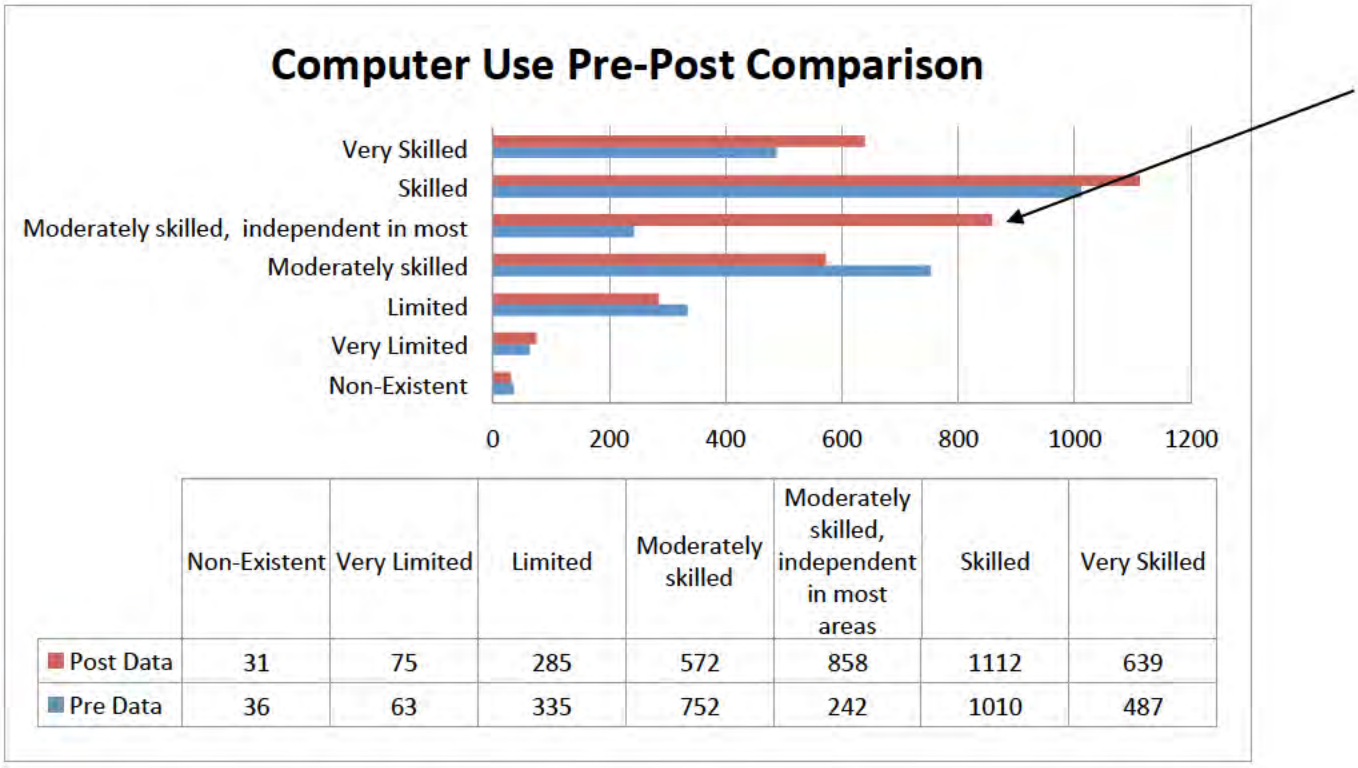
Project Endeavor participants were asked to rate their Computer Use and Internet Use using the following scale:

- Non-existent, never used
- Very limited, unable to work independently

- Limited, need training on basic use
- Moderate, can use a computer for some tasks
- Moderate skilled, independent in basic use
- Skilled, independent in most uses
- Very skilled, independent in all areas

Figure 3 shows changes in Computer Use over the duration of the project. Two trends are revealed during analysis. As participants in the four lowest levels increased Computer Use, a sharp increase occurred in *Moderate skills, independent in basic use* skill level. Also revealed in the chart is movement of some participants from the *Skilled, Independent in most uses* to the *Very skilled, independent in all areas.* There was also a small decrease in the number of participants reporting non-existent use, which is an important accomplishment.

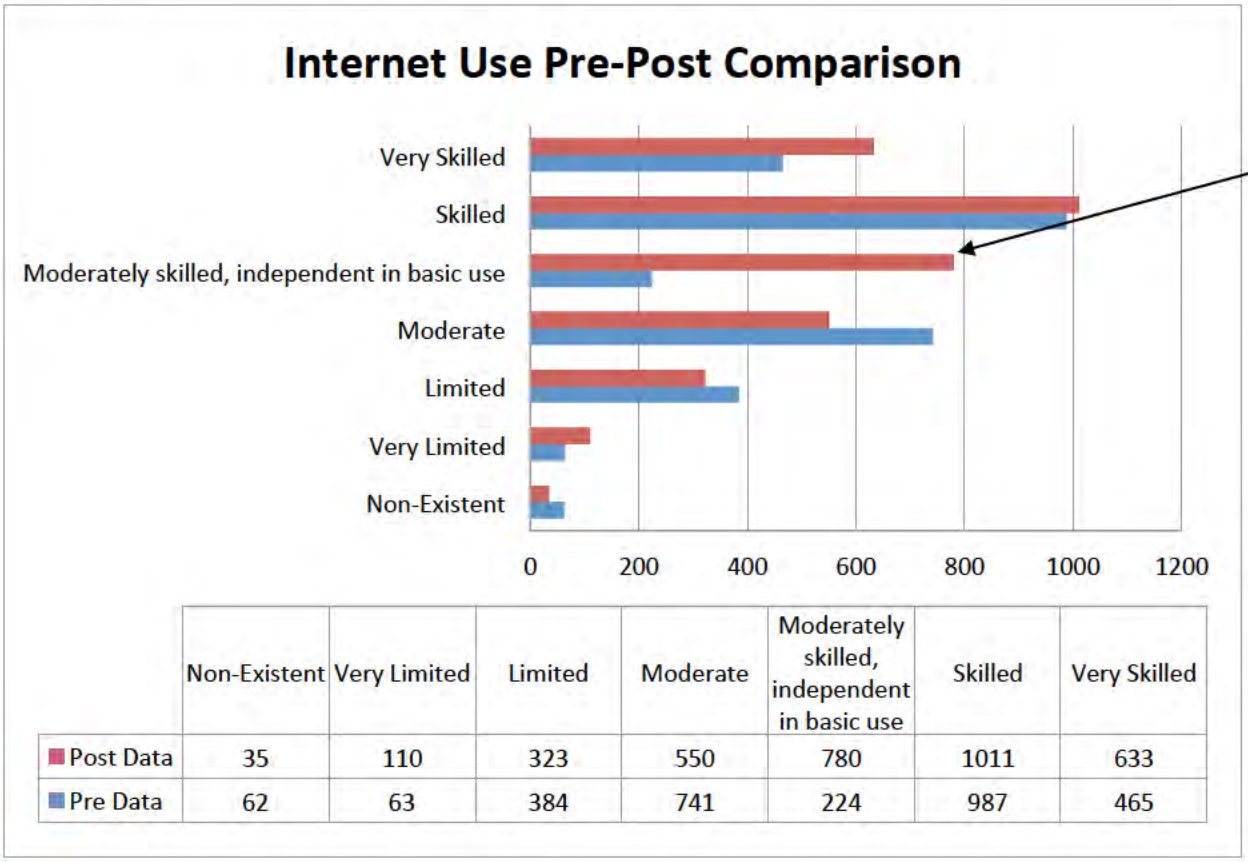
Figure 3. Computer Use Pre-Post Comparison, pre n= 2930; post n=3572



	Non-Existent	Very Limited	Limited	Moderately skilled	Moderately skilled, independent in most areas	Skilled	Very Skilled
Post Data	31	75	285	572	858	1112	639
Pre Data	36	63	335	752	242	1010	487

Internet Use resulted in similar findings as Computer Use. A sharp increase occurred in the *Moderate skills, independent in basic use area.* Also revealed in the chart is movement of some participants from the *Skilled, Independent in most uses* to the *Very skilled, independent in all areas.* Similar to Internet Use, there was a decrease in participants reporting non-existent use. American Indian/Alaskan Native had the highest percentage of limited & lower ratings; the remaining ethnic groups were approximately equal in skill level. There were no significant differences in gender or hearing status. There were differences in age groups with 18-20, 50-59, and 60+ reporting the highest percentages of limited & lower skills.

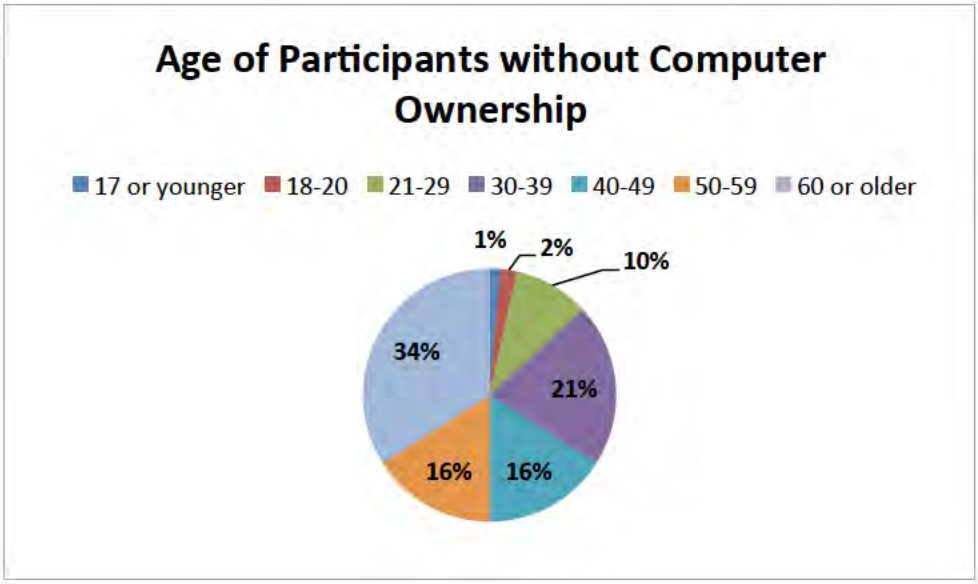
Figure 4. Internet Use Pre-Post Comparison, pre n=2926; post n=3442



	Non-Existent	Very Limited	Limited	Moderate	Moderately skilled, independent in basic use	Skilled	Very Skilled
Post Data	35	110	323	550	780	1011	633
Pre Data	62	63	384	741	224	987	465

Additional Findings from the Post Digital Literacy Survey

Figure 5. Computer Ownership and Age of Participants



Only 5% of participants in the post digital literacy survey did not own a computer or other device that connects to the Internet. Of those who did own a computer, about an equal number owned a laptop and 18% owned tablets. Most computers (55 %) were 2 years old or older. Figure 5 reveals the age groups of participants who do not own a computer. Participants 60 years old and older were the largest group that did not own a computer (34%) followed by the 30-39 age group (21%).

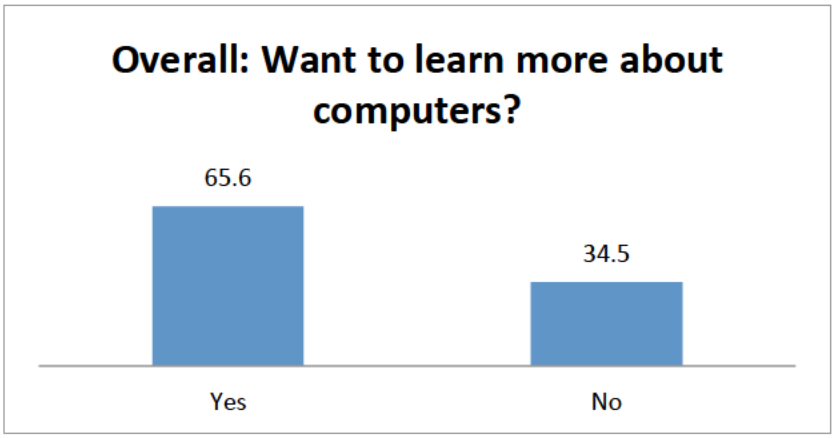
Table 1. Locations Where Participants Access Computers

Location of Computer Use	Number	Percentage
Home	3302	50.59%
School	357	5.47%
Work	973	14.91%
Family member	743	11.38%
Library	483	7.40%
Friends	472	7.23%
No Access	75	1.15%
Other	122	1.87%

Note: Participants could provide multiple responses to this question.

When asked about frequency of Computer Use, about one third responded up to 2 hours a week, one third responded 2-4 hours a week, and one third responded more than 4 hours a week. Over 90% have access to computers in various locations: home, work, at a family member's home, library, friends, and school in order of frequency.

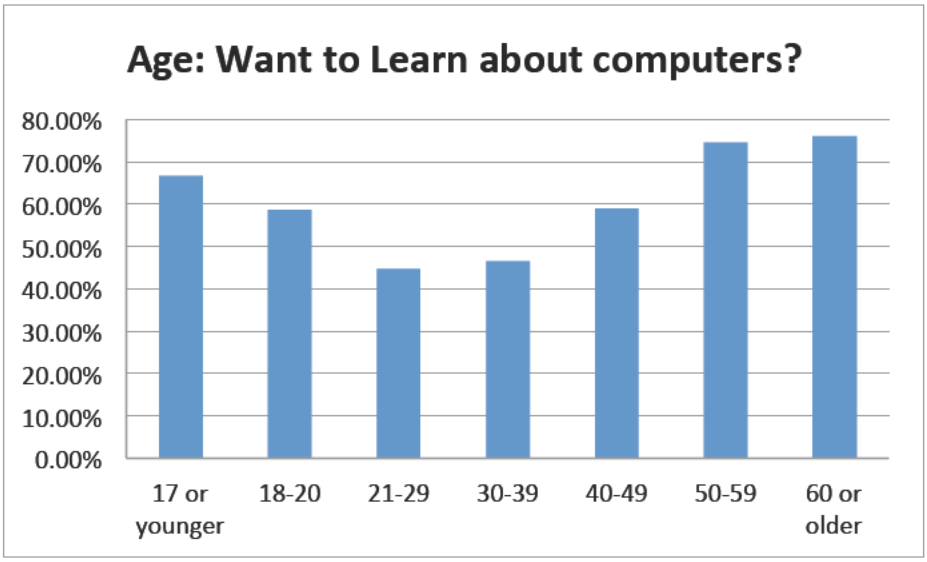
Figure 6. Percentage of Participants Responding to: Want to learn more about computers?



The need to learn more about computers was reported by 66% of participants. There were no differences in gender or hearing status.

Differences in ethnicity were found with Black/African Americans responding at a higher rate (72%) than the other ethnicities. However, all races responded above 50% that they wanted to learn more about computers.

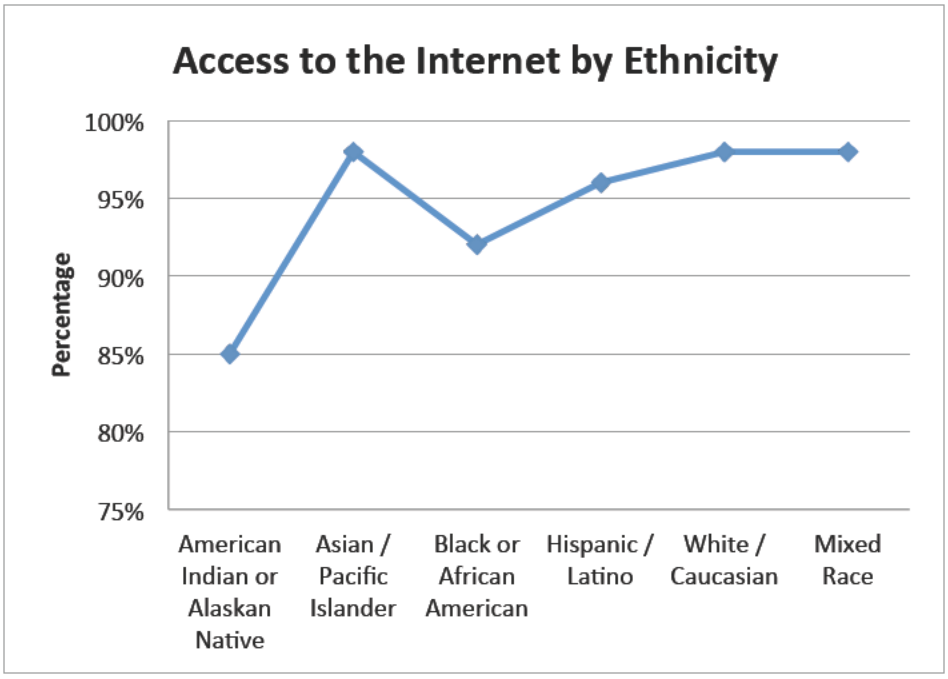
Figure 7. Age of Participants Responding to Question: Want to learn more about computers?



Age of participants indicated that younger and older participants wanted to learn more about computers. It is important to note, however, that all age groups responded above 40% to this question, and this reveals a need for more training for this population.

Internet Use Findings

Figure 8. Access to the Internet by Ethnicity



Findings revealed that 90% of participants have access to the Internet, 2% do not have access, and 8% did not respond. Differences in ethnicity were found with American Indian/Alaskan Native reporting Internet access at a

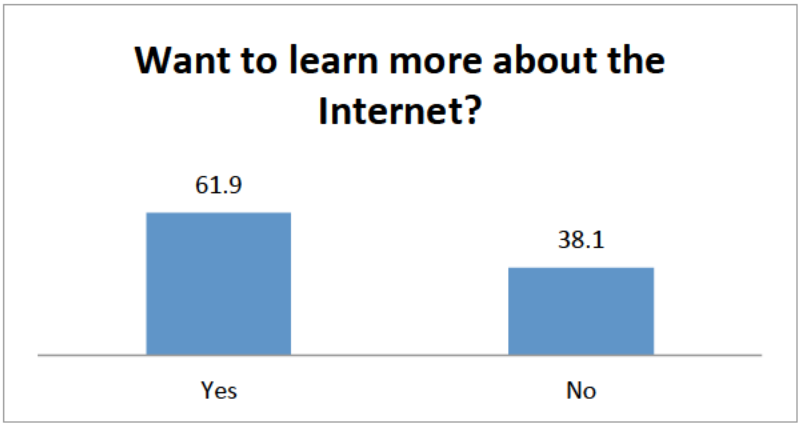
lower rate that the other ethnicities. No differences were found by gender, hearing status, or age regarding Internet access.

Table 2. Type of Internet Used by Participants

Type of Internet	Number	Percent
Cable	2213	42.17%
Dial up	37	0.71%
DSL	863	16.44%
Satellite	64	1.22%
Mobile Broadband	222	4.23%
Wireless	1596	30.41%
Other	199	3.79%
None	54	1.03%

Most participants have access to the Internet with the majority subscribing to cable, although there are still a few participants who use dial-up. Most participants access the Internet at their home (88%), at work (23%), at family members, friends, library, and school in order of frequency.

Figure 9. Percentage of Participants Responding to: Want to learn more about the internet?



Over 60% responded that they needed further training in using the Internet. There were no significant differences in ethnicity, hearing status, or gender regarding wanting to learn. There were significant differences in age groups: 60+ wanted to learn more (76%), 50-59 (72%), 40-49 (53%). The remaining age groups were approximately the same.

Table 3. Top Internet Skills that Participants Want to Learn

Internet Skills that Participants Want to Learn	Number
Create website	1281
Film and edit movies	1164
Create Blog	1095
Create VLOG	1078

Create PowerPoint	943
Create Excel Spreadsheet	923
Use wireless Printer	787
Set Up Wireless Router	774
Save photos	644
Create document	542
Research Family Tree	522

Wireless Internet Access Findings

Participants reported that 84% have wireless access to the Internet. There were no significant differences in gender, ethnicity, hearing status or age. However, American Indian/Alaskan Native, the youngest age group, and deaf-blind/close vision have less access to wireless broadband. Table 4 shows the breakdown of locations where wireless Internet is accessed most often.

Table 4. Location where Consumers Access Wireless

Location of Wireless Internet Access	Number	Percentage
Home	3077	43.2%
Family	800	11.2%
Hotspot	770	10.8%
Friends	701	9.84%
Work	681	9.56%
Library	466	6.54%
School	347	4.87%
Other	218	3.06%

Note: Participants could provide multiple responses to this question.

Table 5. Participants' Mobile and Video Device Ownership

Mobile and Video Device Ownership	Number
Mobile Phone	2546
Tablet (i.e. Thrive, iPad)	2622
Handheld Device (i.e. iPod Touch)	569
Videophone	2327
None	56

Participants were also asked what kinds of mobile and video technologies they own. Table 6 shows a breakdown of the ownership of mobile devices. It was anticipated that deaf and hard of hearing of hearing participants would have videophones because these were distributed at no cost by VRS companies. However, the impact of Project Endeavor's distribution of mobile, wireless-enabled devices is apparent as the number of tablets and mobile phones exceed the number of videophones.

Table 6. Devices Participants Use for Video Communication

Technology	Number
Videophone	2808
Mobile Device	1621
Computer	1696
Other (please specify)	260
Not Applicable	151

Although participants own mobile devices, when asked which technologies they use for video communication, videophones was the response most often given. Videophones use cable or DSL landlines and the quality of the video is more reliable than over wireless Internet. Focus group participants also responded that when communication was critical, such as when calling a physician, they relied on the videophone instead of wireless devices because video over wireless can be unstable.

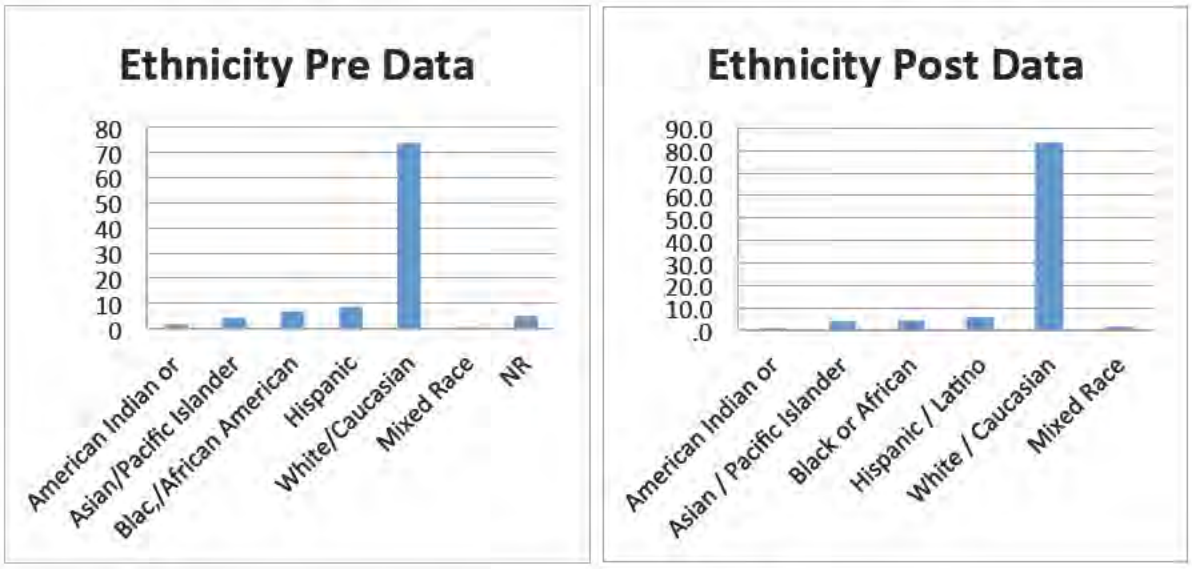
2. DEMOGRAPHIC PROFILE OF PARTICIPANTS IN PRE-POST DIGITAL LITERACY DATA COLLECTION

An analysis of demographic information of participants in the pre-post digital literacy revealed similarities in gender, ethnicity, and hearing status. However, there were differences in age groups with more responses from retires in the post digital literacy survey. Because these groups were not equivalent, generalizations about the results of this measure would not be appropriate or useful. In addition, subgroup analyses often involved small numbers of participants and, therefore, caution should be observed when making conclusions about findings. The following charts provide information about the participants in the pre-post data collection.

Figure 10. Gender of Project Endeavor Participants

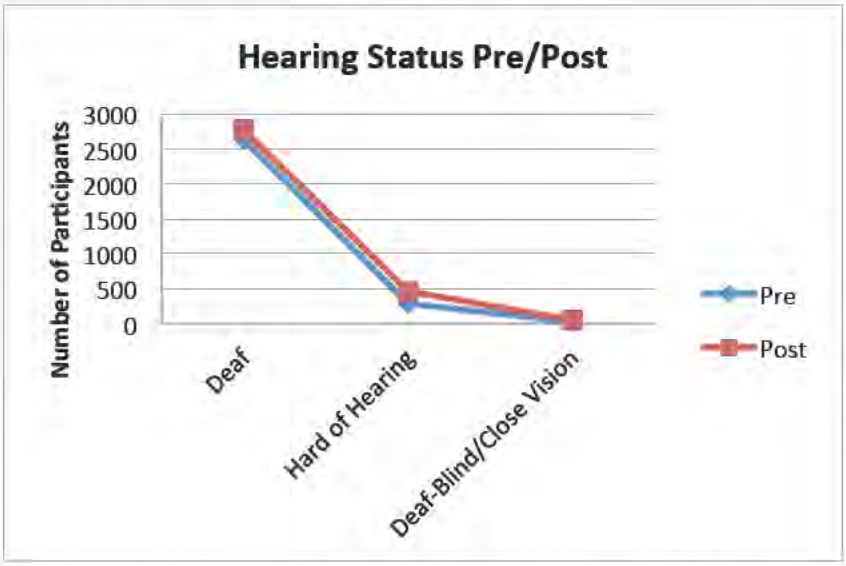
Consistent with the general demographics of the deaf and hard of hearing population, the majority of participants were Caucasian.

Figure 11. Ethnicity of Project Endeavor Participants by Percentage



During the pre-data collection, a majority of the participants were in the 45-54 age category, born between the years of 1959-1968, which is congruent with prevalence data that reveals a population increase resulting from the Rubella epidemic of 1963-1965.[9] Post-data collection, however, included more responses from those who were 60 years and older (31%) who were retired with the next largest group of respondents 40-49 years of age (24.7%). A total of 79% of all responses in the post-data were from participants 40 years old and older, slightly more than participants in the pre-data group. This should be considered when making generalizations about the project's results.

Figure 12. Hearing Loss Status of Participants



Pre-data responses to hearing loss status resulted in 89% deaf, 10% hard of hearing, and 1% deaf-blind/close vision. Post-data were similar with 84% deaf, 14% hard of hearing and 2% deaf-blind/close vision.

[9]See Centers for Disease Control and Prevention (http://www.cdc.gov/features/rubella/)

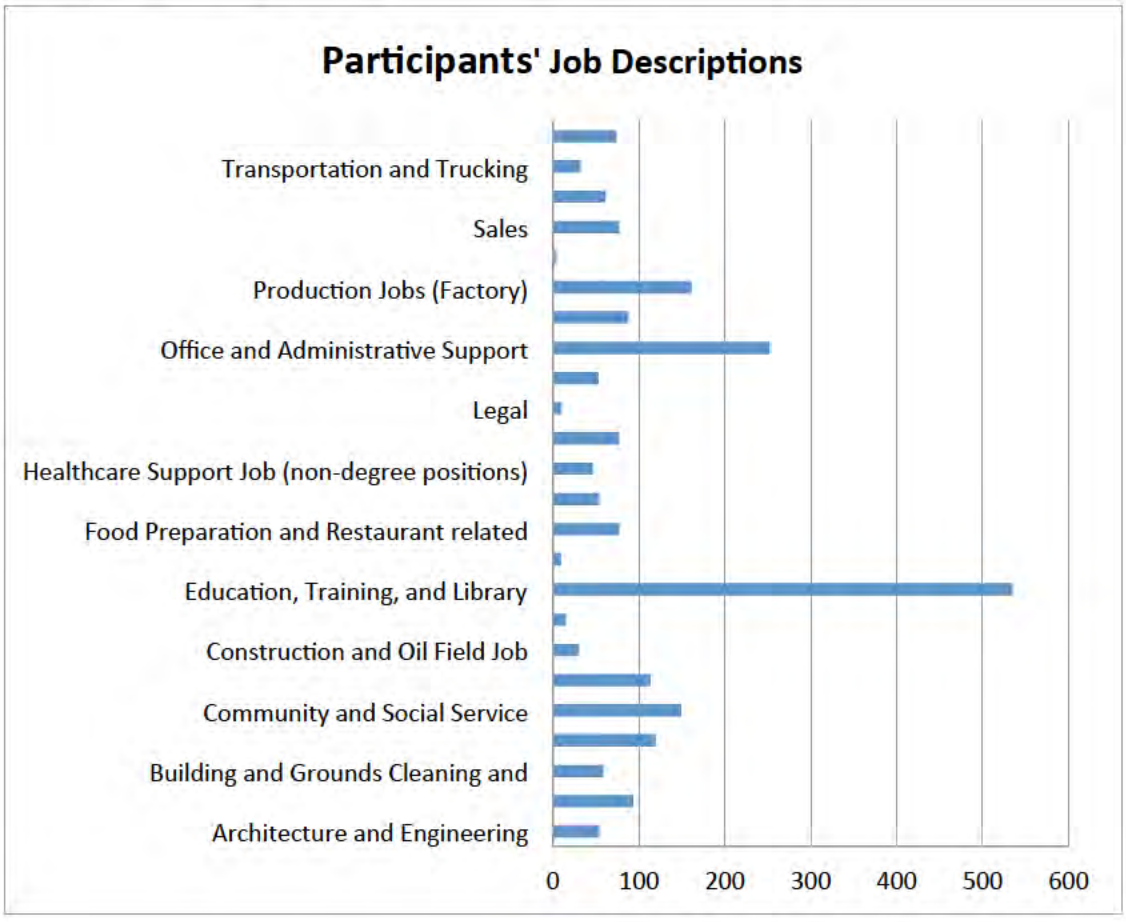
Although the groups were non-equivalent, characteristics of the two groups were similar: The majority of participants in both groups were deaf, female, over 40 years of age, and Caucasian.

Table 7. Post Digital Literacy Participants' Educational Attainment

High School	GED	No High school diploma	Some college but no degree	Associate degree	Bachelor degree	Graduate degree	No Response
21.3	1.1	2.7	19.6	11.6	16.3	13.9	13.5

A one-way between-groups analysis of variance was conducted to explore the impact of ethnicity, gender, and age on educational attainment. No significant differences were found for ethnicity and gender. However, age 17 and younger and 18-20 had lower educational attainment (because they could still be in school). Aside from these two groups, the other groups were similar except for 60 or older having lower educational attainment. Asian/Pacific Islanders reported the highest percentage of bachelor degrees (26%) and White/Caucasian reported the highest percentage of graduate degrees (17%).

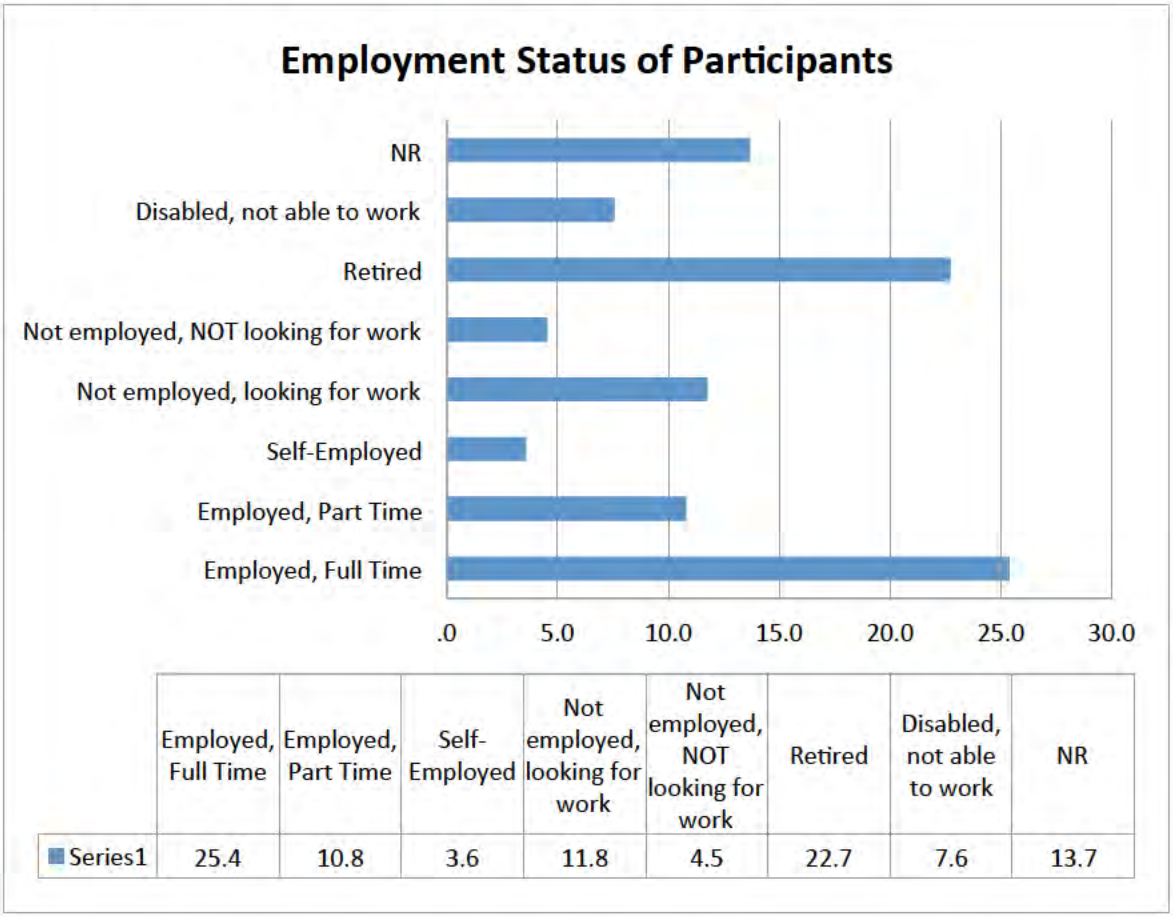
Figure 13. Type of Job Held by Participants



The majority of participants (27%) were employed in education and healthcare, 15% were employed with the federal government, 25% for-profit businesses, 19% nonprofit organizations, and 15% for city, county, or state government.

Deaf and hard of hearing participants worked in all other areas listed on the survey. Most survey participants worked in *education, training, and library services* followed by *office and administrative support* and *production jobs (factory)*.

Figure 14. Employment Status of Participants

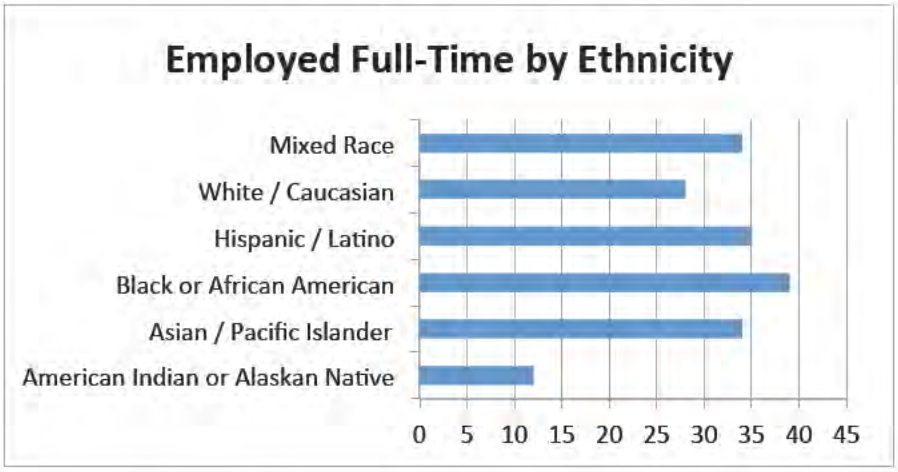


	Employed, Full Time	Employed, Part Time	Self-Employed	Not employed, looking for work	Not employed, NOT looking for work	Retired	Disabled, not able to work	NR
Series1	25.4	10.8	3.6	11.8	4.5	22.7	7.6	13.7

Questions regarding employment status were also asked to identify trends in employment rates among deaf and hard of hearing participants. The highest responses by participants in the survey were *employed full time* (25%) or *retired* (23%). *Not employed, looking for work* resulted in 11.8% which is higher than the national unemployment rates for the general population.

There were no differences in the employment rates of deaf vs. hard of hearing participants. However, deaf-blind/close vision had the highest rates of *Not employed looking for work* (23%). Deaf-blind/close vision also had the highest rates of *Disabled, not able to work* (35%). Related to gender, more males (35%) worked full time than females (26%).

Figure 15. Employment Rates by Ethnicity



Employment rates in full-time positions by ethnicity ranged from 39% to 12% with Black/African Americans having the highest employment rate (39%) followed by Asian/Pacific Islanders (34%), Hispanics (35%), Mixed Race (34%), White/Caucasian (28%), and American Indian/Alaskan Native (12%) (see Figure X). Fifty percent of American Indians were retired, which was the largest of all retirees by ethnicity.

3. FOCUS GROUP FINDINGS

Focus groups were held in four different geographical regions to gather information, not only about current services, but also about changing attitudes and anticipated needs. Focus group questions were developed and based on preliminary digital literacy findings and results of the customer satisfaction survey.

Figure 16. Map of Focus Group Locations

Demographic Characteristics of Participants

Twelve males and 16 females participated in the focus groups for a total of 28 participants. Most of the participants (25) were deaf; three were hard of hearing. Approximately half of the participants self-identified as Caucasian; the remaining represented diverse backgrounds. All age groups were represented with the 41-50 having the most representation. The majority of the participants were either employed full-time or employed part-time, five were unemployed, three were retired, and one was self-employed. Eighteen of the participants were college graduates, nine had some postsecondary education, and one had completed high school.

The following themes emerged from the aggregated narrative data and received the most frequent responses after content analyses were conducted.

a. Broadband has made video communication possible and this has improved the quality of life and increased communication parity for deaf and hard of hearing persons.
b. Accessible training is needed to help deaf and hard of hearing persons keep up with the rapid rate of technology innovation. One-on-one or small group instruction is better for visual learning.
c. Broadband has improved the quality of life for deaf and hard of hearing persons in the following areas:
    - Financial. They are able to manage their finances, conduct business, make online purchases, conduct comparative shopping, find cheaper gas, look for coupons, track spending, etc. because of broadband access.
    - Educational opportunities. A few adult learners, who were more likely proficient in English, indicated that online courses are better suited for them because they are self-paced and usually text-based. Online courses are a viable alternative to traditional classroom settings especially in areas with interpreter shortages.
    - Access to more information. Reading online newspapers and other electronic media and greater access to information have improved the quality of life of the participants.
d. Deaf and hard of hearing persons in rural areas and the elderly are more likely to be without broadband access, hence they are more vulnerable to isolation. Wireless access and tablet devices (iPads) have improved the isolation of elderly deaf and hard of hearing. However, those living in rural areas with limited access to broadband often remain isolated.
e. There are pros and cons to technology use. Deaf and hard of hearing persons, like many Americans, feel that they must control the usage of technology instead of technology controlling them. They are concerned about the amount of technology used by their children and feel it may compromise their children's social development.
f. Participants in the focus group were broadband users. However, they reported that there are deaf and hard of hearing persons without access to broadband in both and urban areas.
    - Reaching Persons in Rural Areas
      Focus group participants reported that some deaf and hard of hearing individuals residing in rural areas do not have access to broadband because it is not available in their areas. Further, when it is available, the cost of broadband access can be prohibitive for those on limited incomes.
    - Reaching Persons in Urban Areas
      Focus group participants reported that deaf and hard of hearing people living in urban areas have greater access to information because there are larger deaf communities in cities, and these individuals tend to share information and assist one another in learning about broadband options. In addition, there are more opportunities to access broadband in public areas such as libraries. Affordability, however, was identified as being the primary challenge for individuals without broadband access in urban areas: the cost of the monthly mobile phone and the cost of a traditional broadband connection in their residence were often not sustainable. Therefore, deaf and hard of hearing persons in urban areas are increasingly using their mobile devices as their primary technology for communication.
g. In both rural and urban areas some deaf and hard of hearing persons use text messaging on cell phones as their primary way to communicate, and they are satisfied with this level of service because there are no affordable broadband options. Further, participants reported that often these individuals feel that cell phones are adequate and subscribing to broadband would not improve their lives significantly.
h. A participant reported using Facebook for emergency situations to get assistance from friends quickly.

Future Broadband Technologies with Potential to Improve Quality of Life

Focus group participants were asked to look in to the future of broadband and image technologies that would be life changing for them. The following were reported:

- Increased capacity of wireless modems/routers and adequate bandwidth to produce stable video communication over wireless devices
- Video Remote Interpreting (VRI) and *on demand* interpreting services 24/7
- Access to local, emergency information in a timely manner on their mobile device
- Ability to text 911 in emergency situations

VI. CUSTOMER SATISFACTION FINDINGS

DATA COLLECTION METHODS
Captioned Telephone Customer Satisfaction Online Survey
Customer Satisfaction Online Survey
External ASL Educational Video and Website Review

1. CAPTIONED TELEPHONE CUSTOMER SATISFACTION

After receiving a CapTel captioned phone and/or wireless Cradlepoint Internet router, seniors were contacted for a follow up call and asked if they would be willing to participate in a brief survey. The survey was administered over the phone and responses were collected by agents who submitted the responses in an online survey. Customer Satisfaction was very high among low income seniors who received the captioned phone. The participants in the survey also provided narrative responses, which were overall positive.

There were five statements in the survey that elicited responses from participants. Results are provided in Figures 18 – 20 and Table 7.

Captioned Telephone Program Customer Satisfaction Survey Results, n=260

Figure 17. Responses to: Tell us about your experience using the CapTel 840i equipment. (Select all that apply)

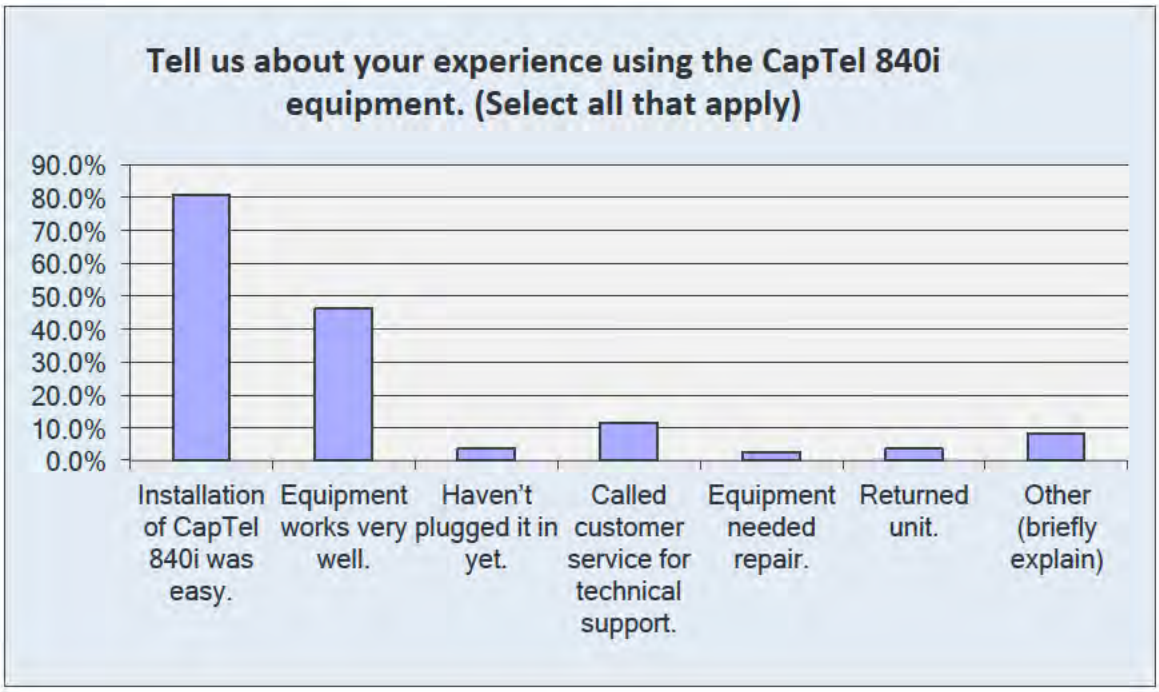


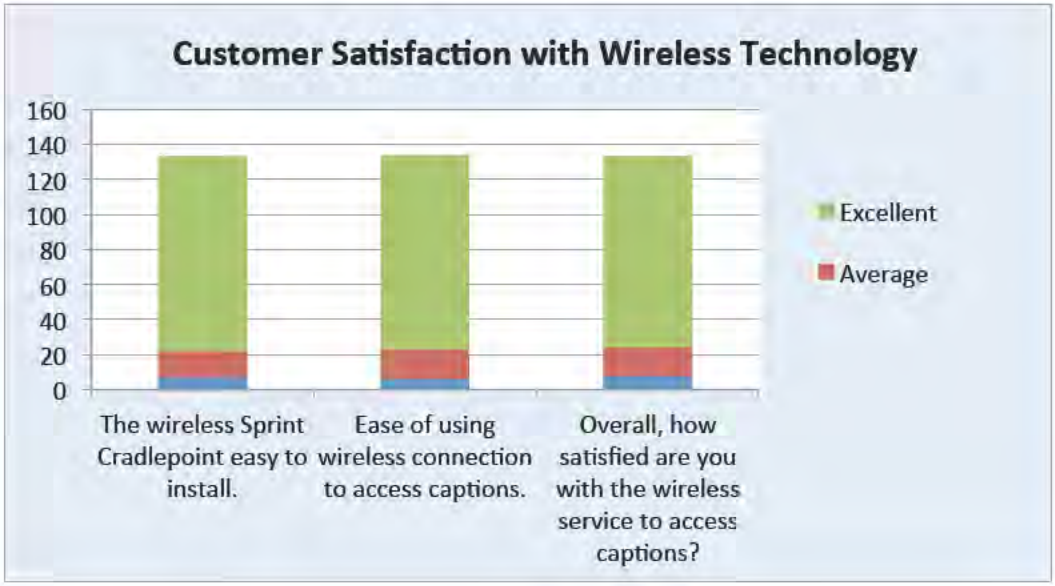
Figure 18. Responses to: Tell us about the captioning service experience.

Two areas resulted in lower responses by participants:

- Caption text generally keeps up with conversation
- Quality of the captions

Participants are generally happy with the CapTel phone and service. It has improved the communication with family and friends. Some expressed thanks for the discount offered to purchase the phone and others expressed, "the captioned phone is a life-changer." Some did not like pushing the caption button for each call, thought the captions were slow, and others thought the phone was too complicated to use.

Figure 19. Responses to: Tell us about your wireless technology.



Overall, participants were very pleased with the wireless router. The installation was easy for most while others experienced problems setting up the phone. Some thought it pricey, but others appreciated the discounted service package saying, "We would have never gotten the package without the discount from Project Endeavor."

Table 8. Responses to: Rate how well customer service performed in the following areas:

Answer Options	Excellent	Average	Needs Improvement
How helpful was customer service?	143	25	1
Did the representatives communicate clearly?	147	17	1
Did you receive professional and courteous service?	144	18	1
Were all your questions answered in a timely manner?	141	23	0
Did the pricing for the equipment and services meet your expectations?	201	18	4
Do you feel you received a good price for the equipment and services?	204	20	3
Overall, how satisfied are you with customer service?	178	19	2

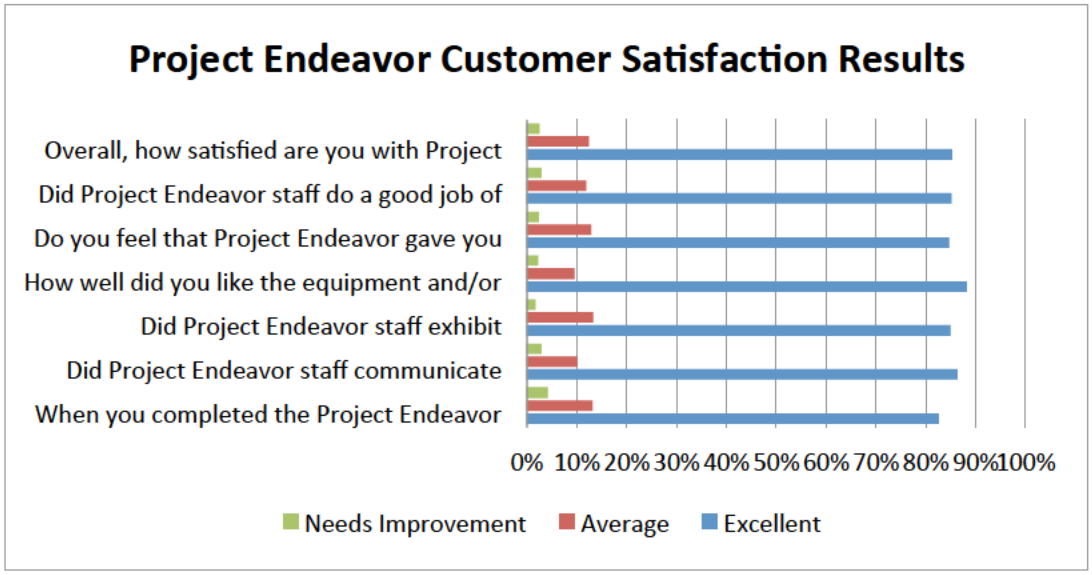
COMMENTS BY PARTICIPANTS

- Overall senior participants were thankful for a captioned phone provided to them by the program.
- Many participants commented that the discount helped them financially.
- Customer Service agents received many accolades for their helpfulness, patience, and ability to resolve problems quickly.
- Agents often talked with family members of participants who were assisting their parents or grandparents with the captioned phone. These family members were generally pleased with the phone and the assistance offered by the customer service agents.

2. PROJECT ENDEAVOR CUSTOMER SATISFACTION SURVEY

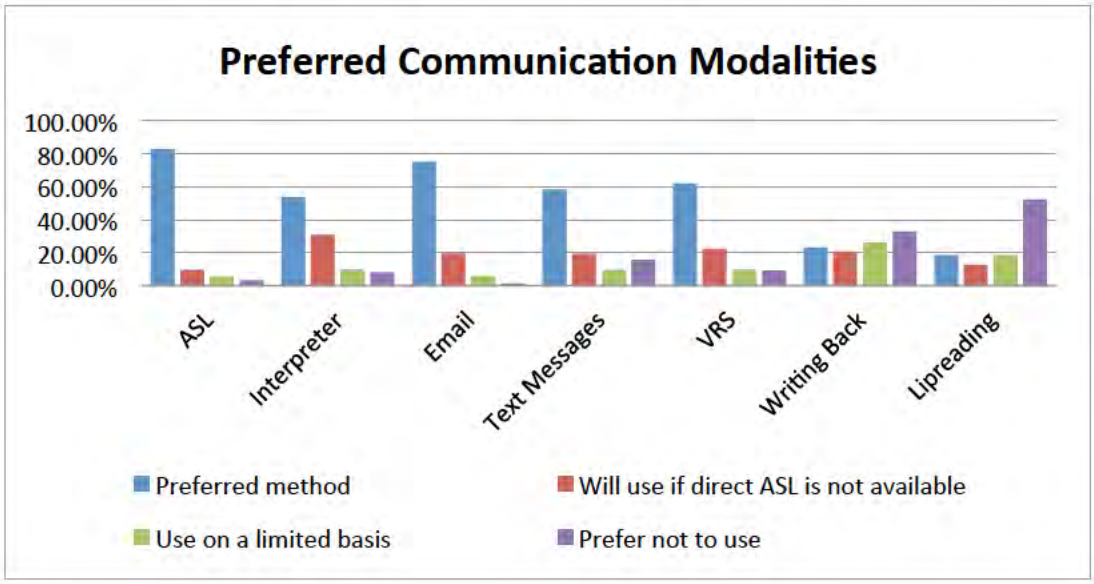
An online Customer Satisfaction Survey was disseminated to Project Endeavor participants to provide feedback to the management team.

Figure 20. Results of Customer Satisfaction Survey, n= 583



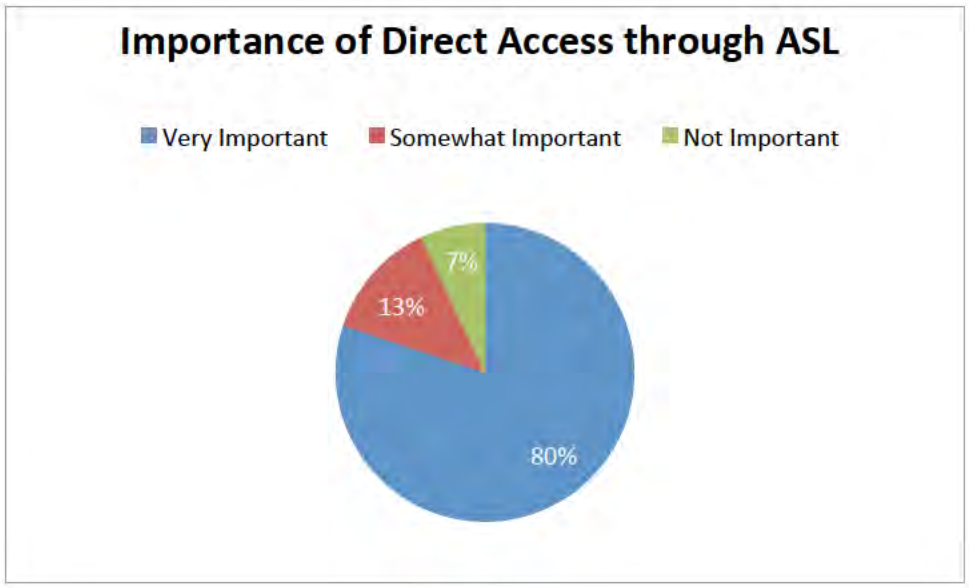
Results were very positive in that over 80% of participants rated the level of services Excellent in all categories.

Figure 21. Results of survey questions related to communication preference.



Project Endeavor staff were interested in communication preferences commonly used by deaf and hard of hearing persons. Figure 21 reveals participants' responses in order of preference: 1) directly in ASL, 2) using email, 3) using VRS, 4) text messaging, 5) interpreters. Preference of VRS over live interpreting may have resulted because VRS is readily available, and it is provided at no cost. Although the hearing population often asks deaf or hard of hearing persons if they can lipread, lipreading was the least preferred method of communication. Writing back and forth was the second least preferred method of communicating.

Figure 22. Results of the Importance of American Sign Language in Communication.



Because there are very few federal projects that provide full access for deaf and hard of hearing persons who use ASL as their primary language, participants were asked how they would rate the importance of providing direct communication in ASL. Results revealed that 93% rated having direct access in ASL as very important and somewhat important combined.

CUSTOMER SATISFACTION OVERALL COMMENTS

Participants in the Customer Satisfaction Survey provided suggestions and feedback to improve the program. Generally, participants expressed satisfaction with the subsidized equipment and services. Further, an affordable price/value was provided for the latest equipment, like iPads. They appreciated this special program to assist the deaf community and would like to see it continue because technology is always changing. Since very few programs offer communication in ASL, most participants were grateful for the ease of communication with the Contact Center representatives even though participants sometimes had to wait for their order to arrive. While participants reported using their wireless devices for a variety of purposes like job searching and educational opportunities, most enjoyed the video capability to connect with family and friends using ASL. Most participants expressed sincere thanks for the Project Endeavor program as exemplified by the following comments:

- *God bless you for your hard work on behalf of Deaf people.*
- *It is wonderful to have this project as it helps me to keep in touch with friends and others who received equipment. Thanks.*
- *I think project endeavor is an excellent program, and I am so very grateful for being able to get an iPad. Service representatives are very knowledgeable in your products and willing to answer any and all questions…*

Participants provided a range of comments from excellent to needs improvement. They shared many comments about the amount of time it took to place an order. Some felt that customer service was slow. Others commented that there was no videophone connection or that they received too many email correspondences. Some information provided about the products and services was incorrect, and participants initially had several agents working on their order which caused confusion. Others complained they didn't know about the program until it was too late to apply. And others wanted more instruction on using their devices.

Overwhelmingly, participants agreed, more funding for programs like Project Endeavor is needed in the future.

EXTERNAL WEBSITE AND ASL EDUCATIONAL VIDEO REVIEW

Production of Educational Videos

The Project Endeavor Media Team produced over 430 educational videos in ASL that covered a wide-range of topics to address participants' gaps in digital literacy. Some topics were suggested by the Contact Center representatives based on their experiences with applicants.

Other topics were selected to keep abreast of technological innovation. It is important to mention that producing educational videos for persons who are deaf, hard of hearing, deaf-blind, and those with close vision is a labor-intensive process involving the development of scripts, translating the scripts into ASL, videoing and editing the signed narrative, adding captions, and adding voice narration. All videos are maintained in the Video Library on the Project Endeavor website.

Redesign of the Project Endeavor Website

In the fall of 2011, the Project Endeavor website was redesigned to make it easier to navigate and to make it more visually appealing. The new design included a more interesting front page using icons and less text, more video commentary and updates in ASL, and links to a greater number of broadband and digital literacy resources.

After the launch of the newly-designed website, the evaluator conducted an external review of the website and ASL educational video library in order to provide feedback to the media and video production team.

Reviewers

Five deaf or hard of hearing professionals from geographically different regions of the country were recruited to provide an external review of the website and the educational videos. Reviewers were residents of Utah, Indiana, Minnesota, Maryland, & Oregon and were 33-44 years of age. All reviewers were deaf or hard of hearing and held graduate degrees. Three reviewers worked at universities, one worked in deaf education, and one was a full-time doctoral student.

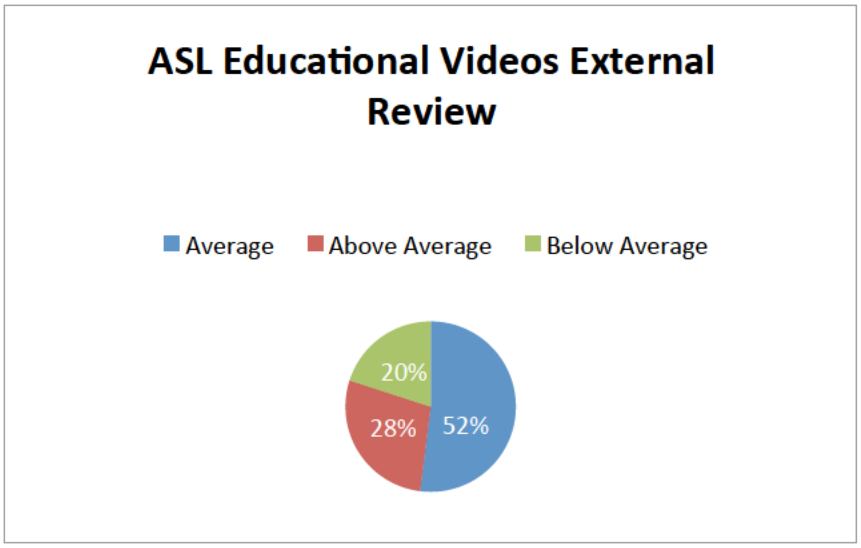
Process

Twenty-five randomly-selected videos were rated using a rating form that was submitted through email as a MS Word document. In addition to gathering quantitative data, narrative comments were also provided by reviewers.

Reviewers rated the ASL educational videos in the following areas:

- The clarity of the video's objectives
- The relevancy of the content
- The helpfulness of the information for most deaf or hard of hearing persons
- Clarity of signed communication
- Whether the video was interesting and engaging
- The appropriateness of the length of the video

Figure 23. Findings from the ASL Educational Video External Review



The findings resulted in 80% of the videos rated as average or high quality. Twenty percent of the videos were rated as below average; however, these were produced in the early stages of the project with older technology. The video quality improved significantly over time as new digital equipment became available to the production team.

An online form was created for the website review with responses submitted electronically. Overall, results were positive regarding the website.

Selected Comments Regarding Website by Reviewers

- The website was user friendly and easy to view
- Icons made it easy to navigate
- The contrasting color of the website is visually appropriate
- The cloud around APPLY helped to locate the tab
- The website is an important deaf community service where people can find resources and detailed information because most public libraries or local workshops are not accessible because they do not provide interpreters or captions.

VII. PROJECT ENDEAVOR'S REACH

1. INCREASING ACCESS TO BROADBAND BY PARTNERING WITH GOVERNMENT AGENCIES

A partnership was initiated with the Virgin Islands Next Generation Network SBA/PCC BTOP program or "viNGN", which includes the Virgin Islands Rehabilitation Center for Disabilities on St. Thomas and the Virgin Islands Regional Library on St. Croix. Project Endeavor provided the SBA/PCC sites with iPads to train deaf and hard of hearing persons to use various apps for communication access using a broadband connection. Because few services are offered for deaf and hard of hearing islanders, Project Endeavor provided training to the site managers. *Train-the-trainer* allowed site managers and staff to become familiar with the features on the iPad used for communication access so they could assist consumers. The iPad features included:

- Facetime and Skype – the iPad camera allows a video connection for individuals to use sign language for communication with each other.
- IP Relay – using the Internet a caller connects with a relay service provider. The conversation is typed back and forth through an agent.
- Video Relay Services (VRS) – using the Internet a caller connects with a Video Relay Service provider. The conversation is signed back and forth through an interpreter. Project Endeavor provided a link to the federal resource for the VRS app. The VRS app is free to download and VRS is free to consumers.

All of the training utilized broadband technologies, thus enabling centers to maximize and strengthen resources for deaf and hard of hearing persons in the U.S. Virgin Islands.

2. INCREASING ACCESS TO BROADBAND THROUGH PARTNERSHIPS WITH VOCATIONAL REHABILITATION (VR) AND TRANSITION SERVICES

Project Endeavor's VR/Transition specialist provided services to unemployed deaf and hard of hearing adults who were receiving services from state Vocational Rehabilitation agencies and deaf and hard of hearing secondary students who are transitioning from school to postsecondary education or employment. These individuals were eligible through Project Endeavor to receive equipment and subsidized broadband, which had the potential to expand their employment and educational opportunities. Through this service the need for a web-based employment curriculum for non-college bound deaf and hard of hearing adults was identified.

Project Endeavor collaborated with the Gallaudet Regional Centers to promote Project Endeavor and pepnet2 to recruit transition students' involvement in the employment curriculum.

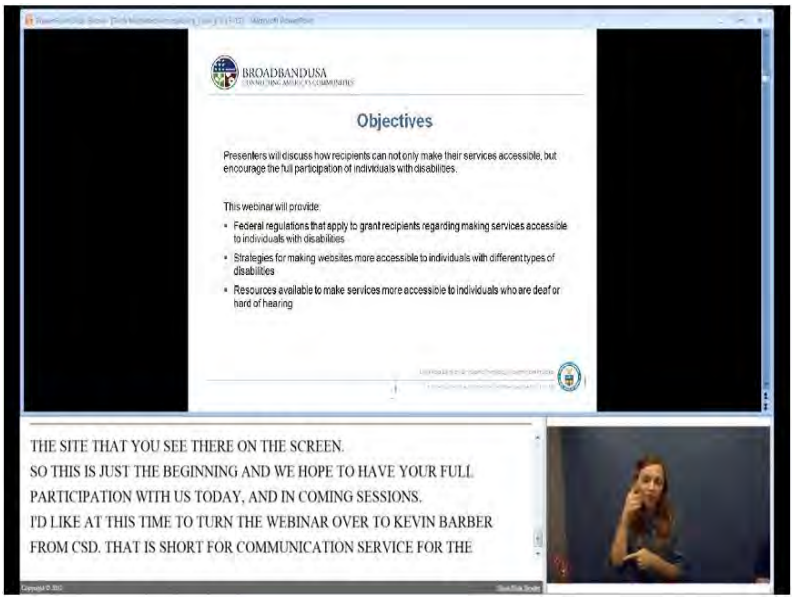
3. PRESENATIONS AT NATIONAL CONFERENCES

CSD provided a demonstration of VRI at the SHLB Conference (Schools, Health & Libraries Broadband Coalition) on May 22, 2012 in Washington, D.C. During the opening remarks, Assistant Secretary Lawrence Strickland's speech was translated into ASL from a remote location using VRI. Deaf audience members viewed the ASL interpreter projected on a screen at the front of the room.

Over 500 representatives from schools, libraries, health care providers and other anchor institutions attended the conference seeking the latest information about federal programs and policies that will affect their broadband access. Policy-makers learned how anchor institutions can maximize their broadband to become more inclusive by providing communication access.

4. TECHNOLOGY-MEDIATED ACCESSIBILITY FOR PERSONS WITH DISABILITIES

A webinar on "Technology-Mediated Accessibility" was held on May 16, 2012 with representatives from the National Telecommunications and Information Administration (NTIA), the U.S. Department of Commerce, Office of Disability Rights, and two broadband stimulus fund recipients: The Center for Assistive Technology and Communication Service for the Deaf, Inc. Note: The Center for Assistive Technology at Berkley http://www.cforat.org/ focuses on access to computers and technology for people with disabilities. Their website offers numerous resources.



What made this webinar groundbreaking was not the fact that the representatives met virtually--with the participants scattered from the nation's capitol, across the country in California and also to the prairies of South Dakota, but that the webinar was real-time captioned (CART), featured video remote interpreting (VRI) and on-site interpreting simultaneously.

Broadband technologies today can provide tools for accessibility to encourage participation and inclusiveness in programs and events. For example, the VRI enables businesses/organizations to communicate in real time with deaf/hearing sign language users who are in the same room or location (a conference, a meeting, doctor's appointment, etc.), all by accessing a video interpreter working from a distant location. For many of the participants, this was their first exposure to this level of accessibility for a webinar, and it was an eye-opening experience.

5. BTOP RESEARCH AND EVALUATION WEBINAR – PANEL OF EXPERTS APRIL 17, 2013

Several BTOP recipients engaged in research and evaluation activities designed to assess the effects of BTOP activities on broadband adoption in their communities. The NTIA sponsored webinar featured Dr. Karen Mossberger, The University of Illinois at Chicago, who shared findings from her research on broadband adoption in the City of Chicago; Dr. Sharon Baker, The University of Tulsa, who shared findings from her evaluation of Communication Service for the Deaf's Project Endeavor; and Samantha Cycyk, Assistant Project Director of OneCommunity's Connect Your Community project.

Key points from the webinar for evaluating projects involving deaf and hard of hearing persons:

Working with the diverse population of deaf and hard of hearing persons requires researchers with:

- Communication competence in ASL
- Cultural understanding and sensitivity
- Knowledge of the deaf and hard of hearing community

Researchers should work to reduce language barriers by:

- Translating IRB forms and instruments into ASL
- Adjusting terminology to use common terms
- Ensuring readability by controlling reading levels
- Ensuring that all electronic media are accessible by providing ASL, captions, and voice translation

6. OTHER COLLABORATIONS

Gallaudet University contacted Project Endeavor and requested participation in a study to gather data on the number of wireless tablet devices distributed to deaf and hard of hearing persons to determine wireless tablet adoption trends.

Gallaudet University's Center for Visual Languages and Visual Learning (VL2) contacted Project Endeavor to promote the Center's new iPad storybook products for deaf and hard of hearing children.

University of Rochester, Center on Deaf Health Research inquired about Project Endeavor's findings regarding broadband adoption, computer and wireless technology use to support their application for a telehealth grant for deaf and hard of hearing persons.

Mental Health Therapist from the Deaf Community Services of San Diego inquired about purchasing the series of mental health videos from the Project Endeavor ASL video library for educating their clients on the multiple kinds of mental illnesses.

The San Francisco Department of Aging and Adult Services Invited Project Endeavor to participate in their event entitled Aging & Disability Technology Summit – Connecting Seniors and People with Disabilities to a World of Possibilities – to highlight communication access via broadband for deaf and hard of hearing persons.

Numerous Community Anchor Institutions (CAIs) inquired about obtaining additional Public Access Videophones (PAVs) from Project Endeavor because their organization wished to install the equipment at multiple sites to accommodate their consumers. Because the number of PAVs available was limited, CAIs were directed to videophone companies to purchase additional videophones needed.

VIII. ACKNOWLEDGEMENTS

We would like to thank the CSD team of individuals that worked on Project Endeavor for two and a half years to bring it to successful conclusion. In addition, thanks to the team leading the launch of the VRI Initiative that will allow future generations of deaf and hard of hearing persons' communication access via broadband technology. Thanks to the Project Endeavor program participants who completed interviews, surveys, and participated in focus groups which provided valuable data to the evaluation team. A special thank you to Julie Alrai, licensed Teacher of the Deaf (Pre-K – 12), for creating the interactive online curriculum *"Your Road Trip – Destination Employment*," an educational tool engaging adults in their job search efforts to maximize their broadband experience. Thanks to business partners, Best Buy for equipment dissemination and to Sprint Wireless and their partners, Ultratec, Inc., Weitbrecht Communications, and Feeney Wireless for supporting the CapTel Initiative serving low-income seniors. And last, thanks to Courtney Nelson, PhD from The University of Tulsa who assisted with statistical analysis of the digital literacy survey and to Duane Hanson of Duane Hanson Graphics for the final report layout.

APPENDIX A

Terminology and Descriptions

Deaf and Hard of Hearing

In this report we use deaf and hard of hearing to refer to persons with hearing loss so severe that it interrupts access to communication with the majority of society. It is a diverse population, not only ethnically, but also with regard to their level of hearing, age of onset, etiology, access to early language among many others. The participants in Project Endeavor use American Sign Language as their primary language and access information visually through ASL, written communication, and through print media.

American Sign Language

American Sign Language (ASL) is a visual language used by residents in the United States and in Canada. It is often the 2nd signed language of deaf and hard of hearing persons in other countries; however, it is not universal as many individuals believe. It is one of the most common languages used in the United States among both hearing and deaf persons.

Disability-First Language

This report uses disability-first language, i.e., deaf or hard of hearing persons rather than people-first language used by other disability groups. Disability-first language puts the focus on the cultural and linguistic needs of deaf and hard of hearing individuals because without focusing on these needs up front, the consequences are so severe that there may be life-long implications. Further, it puts the spotlight on culture and identity. These factors are critical for deaf and hard of hearing persons to become literate and educated, to be gainfully employed, and to participate fully in American society.

Deaf-to-Deaf Support

Deaf and hard of hearing individuals, in order to receive any level of technical support or to obtain information from digital knowledge bases, tend to access this support though Video-Relay-Interpreters (VRS), and there are many factors that make this challenging. Interpreting slows down the process of getting through the automated (sometimes voice activated) systems. Once in the automated system, the interpreter's level of expertise and technical knowledge influences how well the services are rendered. Further, the language used by technical support providers tends to be challenging, particularly for individuals with low digital literacy. Removing the interpreter from the process and providing direct access to communication, i.e., Deaf-to-Deaf support equalizes communication access. Moreover, Deaf-to-Deaf support provides, not only communication access, but also adjusts communication and terminology based on the level of digital knowledge of the individual and uses culturally appropriate communication strategies (e.g., non-manual signals) when communicating, making deaf and hard of hearing consumers feel more at ease and trusting with the process.

Contact Center

Similar to a call center using telephones and voice communication, the Contact Center uses a variety of visual communication tools to facilitate participation, i.e., email, instant messaging, videophones, SKYPE, etc. Contact Center representatives manage incoming and outgoing calls and respond to participants' requests for assistance.

Videophones
Videophones are devices that connect to the Internet and display video images on a monitor. The videophone is capable of delivering simultaneous video and audio for communication between people in real time.

Video Relay Interpreting
Video Relay Service (VRS) enables deaf and hard of hearing persons who use ASL to communicate with voice telephone users through video equipment, rather than through typed text. Video equipment links the VRS user with a VRS operator or communications assistant. The VRS user and the communication assistant can see and communicate with each other in signed conversation. This allows the conversation to flow much more quickly than with a text-based TTY call. Read more about VRS at the Federal Communication Commission (FCC) website.

Video Remote Interpreting
When in-person, on-site interpreting services are not immediately available, technology now provides for an interim solution in the form of off-site interpreting services, called Video Remote Interpreting (VRI). VRI uses videoconferencing technology, equipment, and a high speed Internet connection with sufficient bandwidth to provide the services of a qualified interpreter, usually located at a call center, to people at a different location. VRI is currently being used in a wide variety of settings including hospitals, physicians' offices, mental health care settings, police stations, schools, financial institutions, and workplaces. Read more about VRI services on the National Association of the Deaf website.

Captioned Phones
A captioned telephone is a special telephone that has a built-in screen to display in text (captions) everything the other person on the call says. Captioned telephones called CapTel phones are manufactured by Ultratec. When an outgoing call is placed using a CapTel phone, the call is connected automatically to a Captioned Telephone Service (CTS). CTS appeals to people who are deaf, hard of hearing, or late-deafened (such as senior citizens) who communicate by speaking, who want to hear what the other person is saying as much as possible, but who may have difficulty understanding everything the other person says. CTS appeals to a segment of the population whose needs are not met by TTYs or computer devices, or by relay services that rely on typing or ASL to communicate. The majority of people who use CTS have said that this service is far more effective for them than using a TTY with Voice Carry Over (VCO) relay service. Read more about Captioned Phones on the National Association of the Deaf website.

Exit this survey

Project Endeavor Customer Satisfaction Survey

CSD wants to provide quality services to deaf and hard of hearing consumers. Please provide feedback on Project Endeavor's performance. All submissions are anonymous (no one will know your name). If you decide not to complete the survey, just click X on your internet browser.

1. Please rate Project Endeavor services.

	Excellent	Average	Needs Improvement
When you completed the Project Endeavor application, how helpful were the Contact Center Agents?	○	○	○
Did Project Endeavor staff communicate clearly?	○	○	○
Did Project Endeavor staff exhibit professional behavior?	○	○	○
How well did you like the equipment and/or broadband services you received?	○	○	○
Do you feel that Project			

Endeavor gave you a good price for the equipment and/or broadband services?

Did Project Endeavor staff do a good job of answering questions?

Overall, how satisfied are you with Project Endeavor services?

Prev Next

Exit this survey

Project Endeavor Customer Satisfaction Survey

2. CSD's Project Endeavor is committed to providing quality communication access for deaf and hard of hearing customers directly in ASL. Rate the following options based on how important they are when you need information. Check all that apply.

	Preferred method	Will use if direct ASL is not available	Use on a limited basis	Prefer not to use
ASL (communicating directly)	☐	☐	☐	☐
Interpreter	☐	☐	☐	☐
Email	☐	☐	☐	☐
Text Messages	☐	☐	☐	☐
VRS	☐	☐	☐	☐
Writing Back and Forth	☐	☐	☐	☐
Lipreading	☐	☐	☐	☐

Prev Next

Exit this survey

PROJECT ENDEAVOR
Low Cost. Easy Access. Life is Good.

Project Endeavor Customer Satisfaction Survey

3. How important is it to communicate directly in ASL when you need services?

- Very important
- Somewhat important
- Not important

4. How can Project Endeavor improve?

Prev Next

Exit this survey

PROJECT ENDEAVOR
Low Cost. Easy Access. Life is Good.

Project Endeavor Customer Satisfaction Survey

5. How did you find out about Project Endeavor? Choose all that apply.

- [ ] A friend told me
- [ ] At Deaf Expo
- [ ] At a conference
- [ ] From VR counselor
- [ ] From Project Endeavor website
- [ ] From school (teacher or administrator)
- [ ] From online newspaper/vlog/newsletter
- [ ] From a website
- [ ] From advertisement in newspaper/magazine
- [ ] From email blast/twitter/facebook
- [ ] At my church
- [ ] At a Deaf community center
- [ ] YouTube videos

Prev Next

Project Endeavor CapTel Customer Satisfaction Survey

Project Endeavor wants to provide quality services to deaf and hard of hearing consumers. Please provide feedback regarding the CapTel 840i equipment and/or CapTel equipment and Internet service purchased through the Project Endeavor promotion. Your feedback helps evaluate the Project Endeavor program. This project was funded through a grant from the Broadband Technology Opportunities Program (BTOP) under the U.S. Department of Commerce. All submissions are anonymous (no one will know your name). This survey will take approximately 10 minutes to complete. Thank you for your participation.

1. Tell us about your experience using the CapTel 840i equipment. (Select all that apply)

- ☐ Installation of CapTel 840i was easy.
- ☐ Equipment works very well.
- ☐ Haven't plugged it in yet.
- ☐ Called customer service for technical support.
- ☐ Equipment needed repair.
- ☐ Returned unit.
- ☐ Other (briefly explain)

2. Tell us about the captioning service experience.

	Excellent	Average	Needs Improvement
The captioned phone improved my access to communication.	◯	◯	◯
Easy to make a captioned call.	◯	◯	◯
Easy to receive a captioned call.	◯	◯	◯
Caption text generally keeps up with conversation.	◯	◯	◯
Quality of the captions.	◯	◯	◯
Overall, how satisfied are you with the captioning services?	◯	◯	◯

Project Endeavor CapTel Customer Satisfaction Survey

3. Tell us about your wireless technology?

	Excellent	Average	Needs Improvement
The wireless Sprint Cradlepoint easy to install.	◯	◯	◯
Ease of using wireless connection to access captions.	◯	◯	◯
Overall, how satisfied are you with the wireless service to access captions?	◯	◯	◯

4. Rate how well customer service performed in the following areas:

	Excellent	Average	Needs Improvement
How helpful was customer service?	◯	◯	◯
Did the representatives communicate clearly?	◯	◯	◯
Did you receive professional and courteous service?	◯	◯	◯
Were all your questions answered in a timely manner?	◯	◯	◯
Did the pricing for the equipment and services meet your expectations?	◯	◯	◯
Do you feel you received a good price for the equipment and services?	◯	◯	◯
Overall, how satisfied are you with customer service?	◯	◯	◯

5. Other brief comments:

APPENDIX D

Note: Pictured above is a sample question. All questions in the survey where presented in ASL, captioned, with voice narration.

Dear Project Endeavor Participant:

We are contacting you because you participated in Project Endeavor and agreed to answer questions for evaluation purposes. This survey is important because it helps the federal government understand the needs for investment in programs like Project Endeavor.

Simply "check" the boxes in each survey question that describe your computer and Internet skills since your participation in Project Endeavor.

Thank you for taking time to complete the survey.

The Project Endeavor Team

The following questions are related to general computer ownership, access and usage.

1. Do you own a Laptop/Desktop Computer?

- [ ] Do you own a Laptop/Desktop Computer? Laptop
- [ ] Desktop
- [ ] None of the Above
- [ ] Other (please specify)

2. How old is the computer?

	Less than 1 year	1 to 2 years	2 or more years	Not Applicable
Laptop	*How old is the computer? Laptop Less than 1 year	Laptop 1 to 2 years	Laptop 2 or more years	Laptop Not Applicable
Desktop	Desktop Less than 1 year	Desktop 1 to 2 years	Desktop 2 or more years	Desktop Not Applicable
Other	Other Less than 1 year	Other 1 to 2 years	Other 2 or more years	Other Not Applicable

3. How often do you use the computer? (per day)

	0 to 2 hours	2 to 4 hours	4 or more hours	Not Applicable
Laptop	*How often do you use the computer? (per day) Laptop 0 to 2 hours	Laptop 2 to 4 hours	Laptop 4 or more hours	Laptop Not Applicable
Desktop	Desktop 0 to 2 hours	Desktop 2 to 4 hours	Desktop 4 or more hours	Desktop Not Applicable
Other	Other 0 to 2 hours	Other 2 to 4 hours	Other 4 or more hours	Other Not Applicable

4. Do you have access to a computer?

- Do you have access to a computer? Yes
- No

5. If you have access to a computer, Where? (Check all that apply)

- [ ] If you have access to a computer, Where? (Check all that apply) Home
- [ ] School
- [ ] Work
- [ ] Family Member
- [ ] Library
- [ ] Friends
- [ ] Not Applicable

☐ Other (please specify)

6. How would you describe your computer skills? (Select one)

- How would you describe your computer skills? (Select one) Nonexistent, Never Used
- Very limited, unable to work independently
- Limited, need training on basic use
- Moderate, can use a computer for some tasks
- Moderate skilled, independent in basic uses
- Skilled, independent in most uses
- Very skilled, independent in all areas

7. Want to learn?

- Want to learn? Yes
- No

8. The following list contains technology skills that people do with their computer. Rate your skills and then tell us if you would like to learn more (last column).

	Can do myself	Can do with help	Never tried-Can't do	I want to learn more.
Save photos in album	☐ *The following list contains technology skills that people do with their computer. Rate your skills and then tell us if you would like to learn more (last column). Save photos in album Can do myself	☐ Save photos in album Can do with help	☐ Save photos in album Never tried-Can't do	☐ Save photos in album I want to learn more.
Film and edit movies	☐ Film and edit movies Can do myself	☐ Film and edit movies Can do with help	☐ Film and edit movies Never tried-Can't do	☐ Film and edit movies I want to learn more.
Create PowerPoint Slides	☐ Create PowerPoint Slides Can do myself	☐ Create PowerPoint Slides Can do with help	☐ Create PowerPoint Slides Never tried-Can't do	☐ Create PowerPoint Slides I want to learn more.
Create a document (letter, report)	☐ Create a document (letter, report) Can do	☐ Create a document (letter, report) Can do with	☐ Create a document (letter, report) Never tried-	☐ Create a document (letter, report) I want to

	Can do myself	Can do with help	Never tried-Can't do	I want to learn more.
	myself	help	Can't do	learn more.
Create Excel spreadsheet (budget, expenses)	Create Excel spreadsheet (budget, expenses) Can do myself	Create Excel spreadsheet (budget, expenses) Can do with help	Create Excel spreadsheet (budget, expenses) Never tried-Can't do	Create Excel spreadsheet (budget, expenses) I want to learn more.
Create a website	Create a website Can do myself	Create a website Can do with help	Create a website Never tried-Can't do	Create a website I want to learn more.
Create a BLOG	Create a BLOG Can do myself	Create a BLOG Can do with help	Create a BLOG Never tried-Can't do	Create a BLOG I want to learn more.
Create a VLOG	Create a VLOG Can do myself	Create a VLOG Can do with help	Create a VLOG Never tried-Can't do	Create a VLOG I want to learn more.
Set up wireless router	Set up wireless router Can do myself	Set up wireless router Can do with help	Set up wireless router Never tried-Can't do	Set up wireless router I want to learn more.
Use a wireless printer	Use a wireless printer Can do myself	Use a wireless printer Can do with help	Use a wireless printer Never tried-Can't do	Use a wireless printer I want to learn more.

The following questions are related to general Internet and WIFI access and usage.

9. Do you have Internet access?

Do you have Internet access? Yes

10. What type of internet service do you have? (Check all that apply)

What type of internet service do you have? (Check all that apply) Cable

Dial Up

DSL

Other (please specify)

Satellite

Mobile Broadband

Wireless

None of the Above

11. Where do you access the internet? (Check all that apply)

Where do you access the internet? (Check all that apply) Home

Friends

Family Member

None of the Above

- [ ] Work
- [ ] School
- [ ] Library
- [ ] Other (please specify)

12. How would you describe your internet skills? (Select one)

- How would you describe your internet skills? (Select one) Nonexistent, never used internet
- Very limited, unable to work independently
- Limited, need training on basic use
- Moderate, can use for some tasks
- Moderately Skilled, independent in basic use
- Skilled, independent in most uses
- Very Skilled, independent in all areas

13. Want to learn?

- Want to learn? Yes
- No

14. The following list are things that people can do online through the Internet. Rate your skills and then tell us if you would like to learn more (last column).

	Can do myself	Can do with help	Never tried-Can't do	I want to learn more
Send Email	*The following list are things that people can do online through the Internet. Rate your skills and then tell us if you would like to learn more (last column). Send Email Can do myself	Send Email Can do with help	Send Email Never tried-Can't do	Send Email I want to learn more
Attach a document to email (Word, PDF, photo)	Attach a document to email (Word, PDF, photo) Can do myself	Attach a document to email (Word, PDF, photo) Can do with help	Attach a document to email (Word, PDF, photo) Never tried-Can't do	Attach a document to email (Word, PDF, photo) I want to learn more
Chat with people (Ichat, Skype, ooVoo, etc.)	Chat with people (Ichat, Skype, ooVoo, etc.) Can do myself	Chat with people (Ichat, Skype, ooVoo, etc.) Can do with help	Chat with people (Ichat, Skype, ooVoo, etc.) Never tried-Can't do	Chat with people (Ichat, Skype, ooVoo, etc.) I want to learn more
Join an online	Join an online	Join an online	Join an online	Join an online

	Can do myself	Can do with help	Never tried-Can't do	I want to learn more
support group/chat room	support group/chat room Can do myself	support group/chat room Can do with help	support group/chat room Never tried-Can't do	support group/chat room I want to learn more
Use Online dating service (Match.com)	Use Online dating service (Match.com) Can do myself	Use Online dating service (Match.com) Can do with help	Use Online dating service (Match.com) Never tried-Can't do	Use Online dating service (Match.com) I want to learn more
Use online ASL Interpreting	Use online ASL Interpreting Can do myself	Use online ASL Interpreting Can do with help	Use online ASL Interpreting Never tried-Can't do	Use online ASL Interpreting I want to learn more
Use online Relay service	Use online Relay service Can do myself	Use online Relay service Can do with help	Use online Relay service Never tried-Can't do	Use online Relay service I want to learn more
Use online Captioning service	Use online Captioning service Can do myself	Use online Captioning service Can do with help	Use online Captioning service Never tried-Can't do	Use online Captioning service I want to learn more

15. Ratings continued

	Can do myself	Can do with help	Never tried-Can't do	I want to learn more
Watch YouTube videos	*Ratings continued Watch YouTube videos Can do myself	Watch YouTube videos Can do with help	Watch YouTube videos Never tried-Can't do	Watch YouTube videos I want to learn more
Watch VLOGS	Watch VLOGS Can do myself	Watch VLOGS Can do with help	Watch VLOGS Never tried-Can't do	Watch VLOGS I want to learn more
Watch online movies/DVDs	Watch online movies/DVDs Can do myself	Watch online movies/DVDs Can do with help	Watch online movies/DVDs Never tried-Can't do	Watch online movies/DVDs I want to learn more
Play online games (Angry birds, Solitaire)	Play online games (Angry birds, Solitaire) Can do myself	Play online games (Angry birds, Solitaire) Can do with help	Play online games (Angry birds, Solitaire) Never tried-Can't do	Play online games (Angry birds, Solitaire) I want to learn more
Use social media (Facebook, etc.)	Use social media (Facebook, etc.) Can do myself	Use social media (Facebook, etc.) Can do with help	Use social media (Facebook, etc.) Never tried-Can't do	Use social media (Facebook, etc.) I want to learn more
Add comment to BLOG or VLOG	Add comment	Add comment	Add comment	Add comment

	Can do myself	Can do with help	Never tried-Can't do	I want to learn more
	to BLOG or VLOG Can do myself	to BLOG or VLOG Can do with help	to BLOG or VLOG Never tried-Can't do	to BLOG or VLOG I want to learn more
Look up sports scores	Look up sports scores Can do myself	Look up sports scores Can do with help	Look up sports scores Never tried-Can't do	Look up sports scores I want to learn more
Read online newspapers	Read online newspapers Can do myself	Read online newspapers Can do with help	Read online newspapers Never tried-Can't do	Read online newspapers I want to learn more
Read or view online deaf news	Read or view online deaf news Can do myself	Read or view online deaf news Can do with help	Read or view online deaf news Never tried-Can't do	Read or view online deaf news I want to learn more
Look at my favorite websites	Look at my favorite websites Can do myself	Look at my favorite websites Can do with help	Look at my favorite websites Never tried-Can't do	Look at my favorite websites I want to learn more

16. Ratings continued

	Can do myself	Can do with help	Never tried-Can't do	I want to learn more
Use Search engines (Google, Bing, Yahoo)	*Ratings continued Use Search engines (Google, Bing, Yahoo) Can do myself	Use Search engines (Google, Bing, Yahoo) Can do with help	Use Search engines (Google, Bing, Yahoo) Never tried-Can't do	Use Search engines (Google, Bing, Yahoo) I want to learn more
Search for jobs online	Search for jobs online Can do myself	Search for jobs online Can do with help	Search for jobs online Never tried-Can't do	Search for jobs online I want to learn more
Apply for jobs online	Apply for jobs online Can do myself	Apply for jobs online Can do with help	Apply for jobs online Never tried-Can't do	Apply for jobs online I want to learn more
Look up information (recipes, DIY home repair)	Look up information (recipes, DIY home repair) Can do myself	Look up information (recipes, DIY home repair) Can do with help	Look up information (recipes, DIY home repair) Never tried-Can't do	Look up information (recipes, DIY home repair) I want to learn more
Look up directions/use maps (MapQuest)	Look up directions/use maps (MapQuest) Can do myself	Look up directions/use maps (MapQuest) Can do with help	Look up directions/use maps (MapQuest) Never tried-Can't do	Look up directions/use maps (MapQuest) I want to learn more

	Can do myself	Can do with help	Never tried-Can't do	I want to learn more
Make reservations online (hotel, airline tickets, car rental)	☐ Make reservations online (hotel, airline tickets, car rental) Can do myself	☐ Make reservations online (hotel, airline tickets, car rental) Can do with help	☐ Make reservations online (hotel, airline tickets, car rental) Never tried-Can't do	☐ Make reservations online (hotel, airline tickets, car rental) I want to learn more

17. Ratings continued

	Can do myself	Can do with help	Never tried-Can't do	I want to learn more
Research health information	☐ *Ratings continued Research health information Can do myself	☐ Research health information Can do with help	☐ Research health information Never tried-Can't do	☐ Research health information I want to learn more
Communicate with medical professional (doctor, nurse, dentist)	☐ Communicate with medical professional (doctor, nurse, dentist) Can do myself	☐ Communicate with medical professional (doctor, nurse, dentist) Can do with help	☐ Communicate with medical professional (doctor, nurse, dentist) Never tried-Can't do	☐ Communicate with medical professional (doctor, nurse, dentist) I want to learn more
Order medicines online	☐ Order medicines online Can do myself	☐ Order medicines online Can do with help	☐ Order medicines online Never tried-Can't do	☐ Order medicines online I want to learn more
Research family history/family tree	☐ Research family history/family tree Can do myself	☐ Research family history/family tree Can do with help	☐ Research family history/family tree Never tried-Can't do	☐ Research family history/family tree I want to learn more
Take college course/class	☐ Take college course/class Can do myself	☐ Take college course/class Can do with help	☐ Take college course/class Never tried-Can't do	☐ Take college course/class I want to learn more
Sign-up for a webinar	☐ Sign-up for a webinar Can do myself	☐ Sign-up for a webinar Can do with help	☐ Sign-up for a webinar Never tried-Can't do	☐ Sign-up for a webinar I want to learn more
Request books from public library online	☐ Request books from public library online Can do myself	☐ Request books from public library online Can do with help	☐ Request books from public library online Never tried-Can't do	☐ Request books from public library online I want to learn more

18. Ratings continued

	Can do myself	Can do with help	Never tried-Can't do	I want to learn more
Use online banking services	☐ *Ratings continued Use online	☐ Use online banking services	☐ Use online banking services	☐ Use online banking services I

	Can do myself	Can do with help	Never tried-Can't do	I want to learn more
	banking services Can do myself	Can do with help	Never tried-Can't do	want to learn more
Pay bills online	Pay bills online Can do myself	Pay bills online Can do with help	Pay bills online Never tried-Can't do	Pay bills online I want to learn more
Buy/sell stocks online	Buy/sell stocks online Can do myself	Buy/sell stocks online Can do with help	Buy/sell stocks online Never tried-Can't do	Buy/sell stocks online I want to learn more
Sell things (eBay, Craig's list)	Sell things (eBay, Craig's list) Can do myself	Sell things (eBay, Craig's list) Can do with help	Sell things (eBay, Craig's list) Never tried-Can't do	Sell things (eBay, Craig's list) I want to learn more
Look up coupons online	Look up coupons online Can do myself	Look up coupons online Can do with help	Look up coupons online Never tried-Can't do	Look up coupons online I want to learn more
Find cheapest gas price online	Find cheapest gas price online Can do myself	Find cheapest gas price online Can do with help	Find cheapest gas price online Never tried-Can't do	Find cheapest gas price online I want to learn more
Shopping online (Amazon, Best Buy)	Shopping online (Amazon, Best Buy) Can do myself	Shopping online (Amazon, Best Buy) Can do with help	Shopping online (Amazon, Best Buy) Never tried-Can't do	Shopping online (Amazon, Best Buy) I want to learn more
Order online (pizza)	Order online (pizza) Can do myself	Order online (pizza) Can do with help	Order online (pizza) Never tried-Can't do	Order online (pizza) I want to learn more

19. Do you have access to WiFi?

Do you have access to WiFi? Yes

No

20. Where do you have access to WiFi? (Check all that apply)

Where do you have access to WiFi? (Check all that apply) Home

Work

School

Library

Other (please specify)

Family Member

Friends

Hotspot

Not Applicable

The following questions are related to mobile and video device ownership, access and usage.

21. Do you own? (Check all that apply)

Do you own? (Check all that apply) Mobile Phone

Videophone

None of the Above

Tablet (i.e. Thrive, iPad)

Handheld Device (i.e. iPod Touch)

Other (please specify)

22. Do you use any of the following for Video Communication? (Check all that apply)

Do you use any of the following for Video Communication? (Check all that apply) Videophone

Computer

Not Applicable

Mobile Device

Other (please specify)

23. What is your hearing status?

What is your hearing status? Deaf

Deaf-Blind

Hard of Hearing

Close vision

24. Which category listed below includes your age?

Which category listed below includes your age? 17 or younger

18-20

21-29

30-39

40-49

50-59

60 or older

25. What is your gender?

What is your gender? Female

Male

26. Which race/ethnicity best describes you? (Please choose only one.)

Which race/ethnicity best describes you? (Please choose only one.) American Indian or Alaskan Native

Asian / Pacific Islander

Black or African American

Hispanic / Latino

- White / Caucasian
- Mixed Race

27. What is the highest level of school you have completed or the highest degree you have received?

- What is the highest level of school you have completed or the highest degree you have received? High School
- GED
- No High school diploma
- Some college but no degree
- Associate degree
- Bachelor degree
- Graduate degree

28. What is your employment / job status?

- What is your employment / job status? Employed, Full Time
- Employed, Part Time
- Self-Employed
- Not employed, looking for work
- Not employed, NOT looking for work
- Retired
- Disabled, not able to work

29. Where do you work? (select one)

- Where do you work? (select one) Educational / Healthcare Organization
- Federal Government
- For-profit Business
- Nonprofit Organization
- State, County or City Government

30. Which of the following best describes your current job (position)? (Choose One)

- Which of the following best describes your current job (position)? (Choose One) Architecture and Engineering
- Arts, Design, Entertainment, Sports, and Media
- Building and Grounds Cleaning and Maintenance
- Business and Financial Operations

- Community and Social Service
- Computer and Mathematical
- Construction and Oil Field Job
- Contact Center
- Education, Training, and Library
- Farming, Fishing, and Forestry
- Food Preparation and Restaurant related
- Healthcare Practitioners and Technical
- Healthcare Support Job (non-degree positions)
- Installation, Maintenance, and Repair
- Legal
- Management
- Office and Administrative Support
- Personal Care and Service Job
- Production Jobs (Factory)
- Protective Service (Police, firefighters, security)
- Sales
- Small Business Owner
- Transportation and Trucking
- Vocational Rehabilitation

Thank you for taking the survey. Please take time to look at the Project Endeavor website to see what other information is available to you, your family or friends.

CSD

800-642-6410 (Toll Free Voice)
866-273-3323 (Toll Free TTY)
605-367-5958 (Fax)
www.c-s-d.org

CSD Headquarters • 102 N. Krohn Place, Sioux Falls, SD 57103

Do you have Internet at home? **Yes ____** **No ____**
Do you have a computer at home? **Yes ____** **No ____**
Do you have a VP at home? **Yes ____** **No ____**
Do you use TTY at home? **Yes ____** **No ____**

If you have Internet at home, you use the Internet for what?

Email ____ TTY ____ Search Internet ____ IM chat ____ Video-chat _____ Games ____ Facebook ____ GPS ____ Buy something online ____ Banking online ____ Hobbies _____ Other_____

If no Internet, why?

No service in my area ____ Cost too much____ No computer or VP _____ Don't need _____ Other _____

Do you have a cell phone? Yes ____ No ____

You use your cell phone for what?

Text Message ____ Email ____

More?

Search Internet ____ IM chat ____ Video-chat _____ Games ____ Facebook ____ GPS ____

Buy something online ____ Banking online ____ Hobbies _____

If no cell phone, would you like to use a wireless device (cell phone, PDA, pager, tablet)?

Yes ____ No ____

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Which you like best? (check top three)

Dell 11z Mini Notebook  + 12 months WiFi  ($230.00)

ZVRS  (FREE + 12 months Internet)

Purple (P3) mini _____  (FREE + 12 months Internet)

EVO Mobile _____  $469.00

Samsung Epic Android_____  Retail: $529.00

iTouch Mobile _____  Retail: $229.00

iPad or other Wireless Tablet _____   Retail: $499.00

Suppose CSD gave you a coupon, how much would you be willing to pay?

About how much do you pay for your monthly service? _____

If get new device, how much would you be willing to pay for additional monthly service? _____

Thank you!

Feedback on CSD's Project Endeavor Website & Educational Videos

Thank you for agreeing to participate in the review of CSD's Project Endeavor website and educational videos. Remember that all submissions are anonymous (no one will know your name.) If you change your mind and prefer not to complete the survey, just click cancel (X) on your web browser.

Begin by reviewing the Project Endeavor website located at www.projectendeavor.com.

Next comment on the website's organization and functionality.

Could you locate information easily? Was information accessible and communicated clearly?

Comment on the clarity of the website's purpose?

How would you rate these aspects of the website?

	Excellent	Interesting and helpful	OK, but could be improved	Not interesting/not helpful
Visual appeal/design (color, graphics, print)	◯	◯	◯	◯
The amount information provided	◯	◯	◯	◯
Relevance and usefulness of information	◯	◯	◯	◯
Links to other information/websites	◯	◯	◯	◯

After rating the individual educational videos that you were assigned to review, rate the overall quality of the educational videos using the following scale.

	I agree 100%	I agree 75%	I agree 50%	I disagree
The video content was well organized	◯	◯	◯	◯
The topics were important	◯	◯	◯	◯
The videos maintained my interest	◯	◯	◯	◯
The communication was clear	◯	◯	◯	◯
I learned something from watching the videos	◯	◯	◯	◯

Would you recommend the educational videos to others?

◯ Yes

◯ No

◯ Maybe

How could the educational videos be improved?

How could the website be improved?

Please provide links to other websites and educational videos that you feel are of high quality.

THANK YOU!

APPENDIX F

Website and Educational Video Review
Project Endeavor
http://www.projectendeavor.org/

Rater code: (provided by evaluator)
What is your primary job?
What is your highest level of education?
Gender: M F
Age group: 35-44 45-54 55-64

How many times have you viewed the Project Endeavor website in the past year?

5+ times 2 – 4 times 1 time Never

Please use a separate evaluation sheet for each of the videos you were assigned.

Use the following scale to evaluate the videos:

4 – Excellent **3 – Satisfactory** **2 – OK, could be improved** **1 – Needs improvement**

Name of Video:

	RATING
The video had clear objectives	
The content seemed relevant	
Information would be helpful to most deaf/hh individuals	
Sign communication was clear	
The video was interesting and engaging	
The length of the video was appropriate	

Would you recommend this video to others? YES NO

Please provide additional comments about the quality of the video:

APPENDIX G

FOCUS GROUP PROCESS
Project Endeavor

Four focus groups will be conducted in different geographical locations.

Tentative locations:
Austin, TX
Minneapolis, MN
Northridge, CA
Boston, MA

Participants: Deaf and hard of hearing individuals (who are fluent ASL signers)

Composition of focus group: A mix of Project Endeavor participants and non-participants. The Focus Group participants should reflect a broad, diverse constituency (ethnicity, gender, professionals and grassroots) and be 21 years and older.

Protocol:

- Informed Consent will be distributed in printed form and translated in American Sign Language by Focus Group Leader.
- The group will meet for 2 hours.
- We will try to stick with the starting and ending times.
- The group will contain 8-10 participants; no fewer than 6 members.
- There are 4 questions, so allocate about 20 min per question.

- Outreach staff assigned to the focus group will:
    a. Arrange for a conference room.
        - Room set up (large table with comfortable chairs)
        - Good lighting
        - Flip chart or white board to write on
        - Put out signs to help focus group participants find the meeting room
        - Technology needed: Internet, LCD projector, laptop computer for notes
    b. Contact deaf/hard of hearing individuals to participate in the focus group.
    c. Bring light refreshments (snacks and drinks)
    d. Arrange for a CDI (if deemed necessary)
    e. Assist with focus group facilitation (serve as note taker)

- Focus groups will be conducted by two individuals, one to ask the questions and the other to record actual responses and observations of group behavior.
- A CDI will be employed to assist with communication.
- Remember that focus group leaders should have neutral demeanor (no opinions). You want to know focus group participants' opinions, so must be careful not to skew the outcomes.

- Participants will receive $50.00 each (gift card) at the completion of the focus group. They will sign a form stating they received the $50.00.

- Focus group process:

  1 – Participants arrive, get name tag, refreshments, use restroom (10 min before start)
  2 – Start on time.
  3 – Outreach staff introduces focus group leader, CDI
  4 – Outreach staff welcomes participants: Have each person gives name and from where
  5 - Outreach staff becomes the note taker

Focus group leader begins

Informed Consent
1 - Focus group leader explains informed consent and obtains signatures.
2 - Focus group leader explains rules for focus group.

Rules for focus group participants:

- We have four questions, but other questions may emerge. We will write new questions on the flip chart/white board.
- We value all comments; all comments will be respected.
- Hold up hand to make comment; wait till person is finished.
- After a person makes a comment, you can add to it.
- Feel free to disagree or to agree with elaboration.
- Note taker may suspend discussion to ask for clarification.
- Focus group questions will be open ended:

Questions will be on PPT with an example to get people started if needed.

1 - What changes have you made in your life because of broadband (high speed Internet) or new technology?

Before broadband I couldn't…… Now I can do……
Before (new technology) I couldn't …. Now I can do……

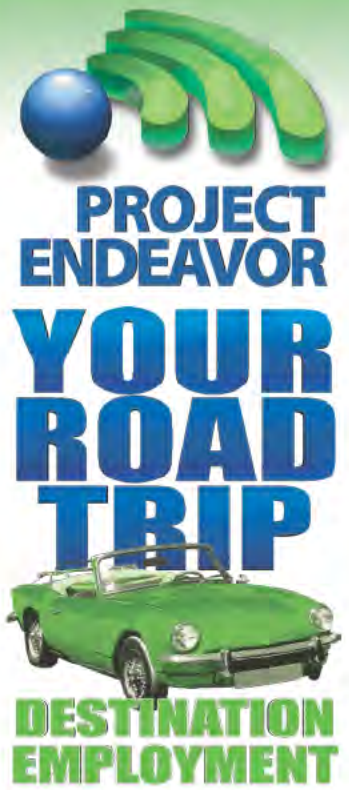
2– What do you want to do with technology, but it is not possible yet or you don't know how?

3 – Do you know someone without broadband? What do you think the barriers are to them acquiring it?

4 - When people talk about new technology what makes you the most excited?

Any other additional comments:

Check Out ASL Videos from Project Endeavor



Project Endeavor has informative videos, captioned, voiced and filmed with actors using ASL. Several videos are available in Spanish too.

CATEGORIES:

- ▶Technology
- ▶Employment
- ▶Advocacy
- ▶Finance
- ▶Equipment
- ▶General Information

Technology

Broadband 101
de banda ancha (español)
Internet 101 part 1
Internet 102
Internet 101 (español)
Computer 101 part 1
Computer 102
Computacion 101 (español)
Video Etiquette
Social Media
Internet Safety
Benefits of Internet
Email Set Up
Facebook
YouTube
Antivirus
Internet Scams
Internet Hoaxes
Email Features
Search Engines
ID Theft
iPad vs PC
Android and IOS Apps
WiFi
Twitter 101
How to Check the Weather
How to Check Flight Status
Using VRI: At the Dentist
Malware Protection
iTunes on PC
iCloud: Setting up iCloud on your devices
How to Subscribe to YouTube
How to Track Number with UPS
How To Use Twitter With Facebook
How to Improve the Battery Life of your iPad2 or iPod Touch
Video Relay Interpreting 101
Video Relay Services 101

ALL VIDEOS ARE SIGNED, VOICED AND CAPTIONED!

Employment

Preparing for Employment
Employment Networking
Employment and Transition Information for Professionals
Communication and Employment
Broadband and Employment
Job Searching Tips
Finding Work through Employment Agencies

Advocacy

Community Support and Advocacy
Internet as a Human Right
Counseling Process Part I
Counseling Process Part 2
Domestic Violence

Finance

Lower your Electric Bill Today
Tax Preparation
ASL Tax Tips: Earned Income Tax Credit 2012 - If you worked in 2011 but didn't make a lot of money, see if you are eligible for the Earned Income Tax Credit (EITC).
ASL ID Theft: Are You a Victim of Identity Theft? - Find out how the IRS can help you if you're a victim of identity theft.
ASL ID Theft: Protect Yourself From Identity Theft - Find out how you can protect yourself from identity theft.
ASL Tax Tips: Choosing a Tax Preparer - Find out how to find a tax preparer you can trust.
ASL Tax Tips: Taxpayer Assistance Centers - Need to talk face-to-face with the IRS?
ASL IRS Tips: For Deaf Users of Relay Services

Equipment

iPad 2 Specifications
Activating Your iPad2 with iTunes
iPad2 Settings
Built-in Apps on iPad2
Public Access Videophone
Overdrive Pro
Dell 11z
iTunes on iPad
Background Info: Acer Aspire

General Information

Project Endeavor Introduction
Project Endeavor Application
Connecting Consumers to Solutions
Terms of Agreement Explained

www.projectendeavor.com

PROJECT ENDEAVOR

BROADBANDUSA
CONNECTING AMERICA'S COMMUNITIES

CSD®

PROJECT ENDEAVOR

YOUR ROAD TRIP

DESTINATION EMPLOYMENT

New online training course: Your Road Trip—Destination Employment

FUN, FREE ONLINE COURSE!

Want a new job? Hope to get a promotion at work? Interested in changing jobs? Project Endeavor now has online training for you in ASL!

Follow the Your Road Trip course through videos, captioned, voiced and filmed with actors using ASL (plus several videos are available in Spanish too!)

Three Learning Modules

- ***Getting Started:*** *This helps you decide if you are ready to work and how working will affect your income.*
- ***Working at Getting a Job:*** *Shows you how to search for a job, complete job applications, write a resume, dress for an interview, gives you interview tips and discusses your communication needs.*
- ***Success on the Job:*** *Explores what to do on your first day at your new job and shows you how to solve problems on the job.*

The Your Road Trip course is fun, interactive and includes many activities and quizzes, as well as a learner's guide and glossary of terms. This course also lets you work at your own pace.

Find the course online at ***www.projectendeavor.com*** *Just click on the picture that shows "Your Road Trip — Destination Employment."*

It's easy to sign up and start training!

www.projectendeavor.com

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